Laboratory Services Series—The Utilization of Scientific Glassblowing in a National Research and Development Laboratory

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MASTER

OAK RIDGE NATIONAL LABORATORY

OPERATED BY UNION CARBIDE CORPORATION FOR THE ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

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Printed in the United States of America. Available from
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road, Springfield, Virginia 22161
Price: Printed Copy \$4.50; Microfiche \$2.25

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Contract No. W-7405-eng-26

PLANT AND EQUIPMENT DIVISION

LABORATORY SERVICES SERIES - THE UTILIZATION OF SCIENTIFIC GLASSBLOWING
IN A NATIONAL RESEARCH AND DEVELOPMENT LABORATORY

R. M. Farnham
Fabrication Department Superintendent

and

R. W. Poole
Chief Glassblower

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APRIL 1976

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37830
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ABSTRACT

Glassblowing services at a national research and development laboratory provide unique equipment tailored for specific research efforts, small-scale process items for flowsheet demonstrations, and solutions for unusual technical problems such as glass-ceramic unions. Facilities, equipment, and personnel necessary for such services are described.

INTRODUCTION

Since the days of Egyptian and Phoenician dominance, glass was associated with developing civilization. The beginnings of modern physical sciences found glass in the service of the alchemists and other pioneers. Unique properties combination of transparency, strength, formability, cleanability, chemical inertness, and electrical resistance made glass a part of each developing science such as chemistry, physics, biology, and medicine. Further development of many specialized glasses has increased the advantageous applications in science laboratories, resulting in continued broad use in today's modern research and development.

At Clinton Laboratory (to become Oak Ridge National Laboratory), a glassblowing shop was established during World War II to supply the specific needs of the chemists, physicists, and associated technical people for research and development work in the nuclear-related fields. The original glassblowers were military personnel of the Manhattan Project, some of whom stayed on following discharge from the army. This scientific glassblowing service continues in 1976.

TYPES OF RESEARCH PROGRAMS SERVED

The Laboratory has had very few research programs since 1943 which did not require direct or indirect glassblowing service support. A combination of useful properties continues to make glass the economic and effective material choice for many scientific laboratory research applications. The large majority of broadly varied research and development programs throughout ORNL history have utilized the scientific glassblowing services with direct benefit, that may have been anything from bench rack concept systems to pilot plant process equipment, to analytical and control applications.

Quartz fiber electrosopes provided the most accurate early measurement of ionizing radiation. Glass Geiger tubes followed. Quartz fiber balances were long among the most sensitive weighing devices. Radioisotope separations chemistry was originated in glass systems. High purity single crystal growing required glass and quartz envelopes. Low temperature investigations required effective dewar vessels of unusual size and shapes. Separation, handling, and use of radioactive or rare gases were most often accomplished in glass ampoules and equipment. Special electron tubes were housed in glass envelopes. Large-bore, precision-tapered glass tube was used in ion separation columns. Biological laboratories depended heavily on glass equipment.

RANGE OF GLASS SHOP SERVICES

The range of glass shop services includes cutting, grinding, lapping, forming and molding, chemical silvering, annealing, encapsulation, evacuation, fabrication of special glass equipment and bench systems, literature search, design or design coordination, preparation of models, and the development of new seals or techniques and seals to other materials. The glassblowers repair or revise a laboratory glass system on location if necessary. The chief glassblower often coordinates the glass-associated requirements for machined or fabricated metal parts, for optical finishing, or for optical film coating.

FACILITIES AND OPERATION

Scientific support work is done in three separate glass shops as well as in the field. The main shop in Building 4500NM has been reduced to only two glassblowers and the chief glassblower at this time. ORNL services the Y-12 Plant glassblowing requirements from a two-man shop there in Building 9766. Also located in Y-12, a one-man shop serves the ORNL Biology Division in Building 9207. Each of three shops is equipped for the lathe and bench work in glass generally required by the customers served in each of these areas. The glassware requirements differ greatly among the three locations in the two plants. Biology Division customers use small or miniature items more often than customers in the other two areas. Y-12 area customers tend to require more massive and repetitive fabrications. The ORNL-situated customers make the broadest variety of demands for glassblowing and glass-related services. With such differences in mind the chief glassblower occasionally reassigns glassblowers within the system, matching the peculiar needs of the customers served and the abilities of the glassblower being assigned. This gives further training to the glassblower and builds a broadly experienced group able to step into any of the shops as needed and do a creditable job. This integrated three-shop system also lends itself well to the shifting of work or men from one shop to another, allowing peak-load leveling and assuring optimum scheduling with efficient utilization of manpower.

EQUIPMENT AND MATERIALS

Specific glassworking equipment in each shop includes:

	<u>4500NM</u>	<u>9207</u>	<u>9766</u>
Lathe, Glass	4	1	3
Saw, Glass	2	3	1
Edging Machine	1	1	1
Lap	1	1	1
Drill	2	2	1
Oven, Annealing	3	2	1
Vacuum System	1		

The arrangement of equipment and a detailed list of equipment for the Building 4500NM shop is attached: (Attachment A.)

All locations have well-equipped glassblowing benches, a good variety of burners, and many hand tools for forming glass. Adequate exhaust hoods over each work station dispose of excess heat to maintain reasonable working conditions.

The variety and sizes of glassware and stocks presently kept in stores by the Materials Departments are listed on the catalog pages of Attachment B. These materials are the starting point for the glassblowers who modify and combine them in the necessary ways to produce the research equipment required. Pyrex and quartz are the most frequently used materials. Glass tube stocks are seldom precisely straight, round, or of constant diameter over their length. The glassblower must often correct a tube before it can be incorporated into the job being done.

One note of interest is that the scientific glassware business has remained metric throughout its history.

PERSONNEL QUALIFICATIONS AND TRAINING

There are many "types" of glassblowing as there are glassblowers and employers. Most glassblowers develop skill and technique according to the training and the available variety of work. Different employers require that their glassblowers use certain techniques peculiarly necessary for their products. ORNL also has its peculiar requirements, and experience has proved it usually best to train glassblowers internally rather than to hire and retrain.

To start a new glass shop for scientific glassblowing one has no choice other than to recruit a competent, experienced glassblower. The prime sources of candidates would include universities, scientific research laboratories, large chemical industries, and laboratory glassware manufacturers. If more than a one-man shop is foreseen, the applicant first hired should have potential in supervision as a chief glassblower. Additional glassblowers can be less experienced.

For glassblower trainees minimum qualifications include high school education with science courses preferred; general good health and vision; and no respiratory problems or unusual sensitivity to heat.

The glassblower trainee is instructed progressively in basic tasks with supplemental course work in mathematics and physics as necessary. Much of the glassware produced in task training is used. Instruction is geared to the individual and his natural rate of progress. As basic manipulatory skills are mastered, special techniques are learned and applied to different and increasingly more difficult assignments. As he moves on through the classification ladder to Junior Glassblower and Assistant Glassblower grades, the trainee remains under the guidance of one or more Senior Glassblower. When he becomes classified as Glassblower he will be competent to handle almost any job routinely submitted to the glass shop and without additional instruction. After more years of experience, the properly prepared person will advance to the classification of Senior Glassblower — able to plan, design, coordinate, and execute in glass any reasonable requirement. The progression from greenhorn to Senior Glassblower may take from 10 to 15 years.

A senior glassblower at ORNL must have considerable knowledge and skill in scientific glassblowing as well as a general knowledge of manufacturing processes and techniques. He must have ability in designing, developing, producing, and repairing the most complicated forms of glassware required by scientific and technical personnel; must know the chemical, physical, and working qualities of many different glasses; must know and be able to utilize various glassblowing and machining tools such as cut-off saws, hot wire, lathes, drills, grinding plates, and other shop devices; must know how to remove, repair, and reinstall broken or damaged glass apparatus; how to anneal by flame and other methods; how to effect glass-to-metal seals, ceramic-to-glass seals and graded seals to match expansion coefficients of other materials; how to mold and press vitrous articles; press and slip cast fritted glasses; how to temper heavy glass fittings, and instruct others. He requires fundamental knowledge of vacuum technique and of other materials for application in glass work. He must be able to interpret and to make sketches and drawings in order to exchange information with requesters, supervisors, and craftsmen. Basic knowledge in physics and chemistry is necessary for discussion and understanding of job requirements with requesters. He must be able to calculate

stresses, pressures, strengths, rate of chemical attack, and other job factors. He must know existing Laboratory policies and procedures, safety and radiation hazards, pertinent new developments, human relations, services and equipment available in the Department shops, and how to attack unique problems.

TYPICAL TECHNICAL GLASSWARE

The following photographs (Figs. 1-9) of actual research glassware used in past programs at Oak Ridge National Laboratory constitute a very limited indication of the work variety. Brief descriptions identify the purpose of each.

Fig. 1. A laboratory glass system for radon gas containing many typical components combined precisely to suit the desired experimental processing intended by the Chemistry Division.

PHOTO 52576

Fig. 2. Mixer-settler unit for first Transuranium Element Processing - Chemical Technology Division.

Fig. 3. Ion Exchange Column for first Transuranium Element Processing - Chemical Technology Division.

Fig. 4. Condenser-receiver for first Transuranium Element Processing - Chemical Technology Division.

Fig. 5. Ion exchange column (for Analytical Chemistry Division) with a temperature control jacket, solution preheater, outer vacuum jacket, and bellows convolutions to limit stress buildup from temperature changes.

Fig. 6. Demountable Ion Gun for the Metals and Ceramics Division. An alignment tolerance of 0.1 mm and the visible 102 mm diameter kovar seals were factors for the glassblower to work out.

Fig. 7. Three dozen interchangeable, disposable units made for installation, operation, and removal by remote manipulator in a hot cell chemical system. Chemical Technology Division.

Fig. 8. Unusual nested, double dewar built to contain liquid nitrogen surrounding liquid helium and having interconnected insulating vacuum spaces. The Physics Division used such dewars in studies of radiation scattering at temperatures near absolute zero.

Fig. 9. Zircaloy II-to-glass seal developed for a chemical process requiring unusual corrosion resistance. Investigation of oxidation characteristics testing of wetting angles and check of final seal strength were development steps necessary.

WORK DEFINITION, SCHEDULES, QUALITY ASSURANCE

The scientists and technical personnel who specify and request glassblowing service do so in many different ways. The exceptional man is one who knows his exact job requirement parameters of operating pressures, temperatures, shock resistance, chemical resistance, electrical resistance, physical dimensions, and also the glasses with characteristics that are acceptable for the application and the best choice of system connections, seals, etc. Occasionally, a job will be overdesigned or overengineered for lack of specialized knowledge or consultation. Dimensional tolerances may be too restrictive for even skilled handwork. Excess material and redundancy may add cost without benefit in use. Most requesters will have some of their operating parameters and equipment general size in mind initially. Discussion with the glassblower or chief glassblower develops the other necessary design information so that the job can be properly done with least work. Others will have only the desired operation in mind and a rough flow sketch of a system, leaving most of the design-and-build work to the glassblower. Many others bring a retort or flask in one hand and a petcock in the other saying, "install this right at this spot," or "add a small condenser there." Most of the tougher and more involved job challenges the glassblower will discuss with, or refer to, the chief glassblower for assurance of best decisions on materials, methods, and processes.

Basic scheduling of glass work is first in, first out. Repair of breakage that delays an experimenter is allowed some priority. Divisions can choose the order of their own jobs and Laboratory-set program priorities are respected. The chief glassblower often corrects unbalance in the workloads of the three shops by moving jobs or manpower from one to another. Overall, the backlog range desired is only one to two weeks. Many small jobs and repair work are wanted immediately.

The chief glassblower is responsible for the work quality produced by his men, so he usually inspects all work visually, also

checking any critical dimensions. The quality assurance originates with competent, conscientious, well-trained glassblowers and good materials. Guidance on other QA measures is supplied by Division and Department procedures.

GLASS SHOP
BUILDING 4500

Equipment List

S2	Lathe, Glass, Universal & Scroll	S11	Saw, Cut-off, Glass
S3	Polarimeter	S12	Grinder, Belt, 4"
S4	Lathe, Glass, Universal & Scroll	S13	Grinding Wheel, 16" Dia.
S5	Lathe, Glass, Universal & Scroll	S14	Drill Press, Pedestal,
S6	Lathe, Glass, Universal	S15	Lathe, Glass, Vertical
S7	Drill, Radial, 1/2" Capacity	S16	Saw, Cut-off, Glass
S8	Furnace, 2000 F. max.	S17	Air Abrasive Unit
S9	Oven, 32w x 48d x 36h, 1400 F. max.	S18	High Vacuum System, 1×10^{-4}
S10	Oven, 18w x 22d x 84h, 1400 F. max.	S19	High Vacuum System, 1×10^{-6}
		S20	Chucking Table, Vertical

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
BALANCE, TRIPLE BEAM, AGATE-BEARING, 13 1/2 IN. OVERALL LGTH, 11 1/2 IN. HT, MAX CAP. 201 GM, NO. 2640, CENCO OR VWR 12337-001	EA	40.26	3	15-005-2051	36
BALANCE, TRIPLE BEAM, SS, 610 GM CAP., 0.10 GM SENSITIVITY, NO. 750S, O HAUS SCALE CORP OR VWR 12340-050	EA	27.03	2	15-005-2101	36
BALL-PESTLE, CLEAR PLEXIGLAS, 3/8 IN. DIA, 100 IN HEAT SEALED PLASTIC BAG	BAG	2.85	12 5	15-005-3501	36
BAR, STIRRING, MAGNET, ALNICO, SEALED IN TEFLON, REMOVABLE PIVOT RING, END CAPS OR PLUGS NOT ACCEPTABLE, BEL-ART F-37111					
DIA X LGTH IN.					
3/16 X 7/8 SARGENT S-76497	EA	.90	3	15-005-3901	36
5/16 X 3/4	EA	.92	23	15-005-3911	36
5/16 X 1 MATHESON 60077-10	EA	.48	23	15-005-3921	36
5/16 X 1 1/4 FISCO 14-511-94	EA	1.07	1235	15-005-3931	36
5/16 X 1 3/4 PREISER 22-2608-07	EA	.94	123	15-005-3941	36
3/8 X 1	EA	.02	2	15-005-3961	36
BAR, STIRRING, MAGNET, ALNICO, SEALED IN TEFLON, OCTAGONAL MOLDED PIVOT RING, END CAPS OR PLUGS NOT ACCEPTABLE					
SIZE IN.					
DIA LGTH					
5/16 (VWR 58948-138) 1	EA	.71	2	15-005-3971	36
5/16 (VWR 58948-150) 1 1/2	EA	.70	2	15-005-3981	36
5/16 (VWR 58948-171) 2	EA	1.08	2	15-005-3991	36
BAR, STIRRING, MAGNETIC, SEALED IN HEAVY WALL PYREX BRAND GLASS, ALNICO MAGNET, NO. F-37101, BEL-ART, OR NO. 22-2510, PREISER					
SIZE IN.					
3/8 X 1 3/8	EA	.61	3	15-005-4051	36
9/32 X 7/8	EA	.89	23	15-005-4101	36
BASE, FLUSH PLATE, THREADED, 1 7/8 IN. DIA, 13 MM ROD DIA, 3/8-16 THD, CENCO 72125B	EA	.00	3	15-005-5101	36
BASE, FOOT, FLEXAFRAME, CASTALDY, WITH SET SCREW AND 3 WOOD SCREWS, FOR ATTACHMENT TO TABLE, FLOOR, ETC, FISHER 14-666-25 OR MATHESON 61050-10 OR VWR 60095-005	EA	.66	23	15-005-5201	36
BASKET, TEST TUBE, RECTANGULAR, DIAMOND WEAVE, CADMIUM PLATED STEEL, SIZE 5 1/2 X 4 X 5 IN., WILL 16602, PREISER 14-4150/01	EA	.30	23	15-005-6001	36
BASKET, TEST TUBE, RECTANGULAR, EXPANDED ALUMINUM, SIZE A, 5 X 4 X 4 IN., MATHESON 61775-10 OR SCIENTIFIC PRODUCTS T1560-1	EA	.68	23	15-005-6051	36
BASKET, TEST TUBE, RECTANGULAR, EXPANDED WELDED STEEL, CADMIUM PLATED, SIZE C, 10 X 6 X 6 IN., PREISER 14-4150-05	EA	2.49	23	15-005-6071	36
BATH, WATER, SHALLOW FORM, TINNED COPPER, 10 IN. DIA, FISHER 15-518 OR WILL 28371	EA	13.85	3	15-005-7101	36
BEAD, SOLID GLASS, KIMBLE 13500 OR CORNING 7268					
DIA MM					
3	LB	17.12	23	15-005-8101	36
5	LB	11.29	1 3	15-005-8121	36
6	LB	8.51	1	15-005-8501	36
BEAKER, BERZELIUS, BOROSILICATE GLASS, TALL FORM WITH SPOUT, CORNING 1060 OR KIMBLE 14030					
CAP. ML					
200	EA	.67	2	15-008-0502	36
300	EA	.65	1	15-008-0522	36
400	EA	.60	1 3	15-008-0542	36
500	EA	.63	15	15-008-0602	36
1000	EA	1.20	1 5	15-008-0622	36
BEAKER, BERZELIUS, BOROSILICATE GLASS, TALL FORM, WITHOUT SPOUT, CORNING 1040 OR KIMBLE 14020					
CAP. ML					
100	EA	.43	2	15-008-0702	36
200	EA	.45	23	15-008-0722	36
300	EA	.60	2	15-008-0742	36
500	EA	.61	2	15-008-0762	36
BEAKER, PORCELAIN GLAZED, WITHOUT SPOUT					
CAP. ML SIZE COORS NO.					
580 3 04002	EA	3.90	3	15-008-1126	36
BEAKER, ELECTROLYTIC, BOROSILICATE GLASS, WITHOUT SPOUT, CORNING 1140 OR KIMBLE 14070					
CAP. ML					
180	EA	.49	3	15-008-2102	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
BEAKER, ELECTROLYTIC, BOROSILICATE GLASS, WITHOUT SPOUT, CORNING 1140 OR KIMBLE 14070					
CAP. ML					
250	-CONTINUED- EA	.68	3	15-008-2202	36
BEAKER, GRIFFIN, BOROSILICATE GLASS, LOW FORM, WITH SPOUT, WITH TEFLON BONDED RIM, CORNING NO. 1000-T					
CAP. ML					
100	EA	.72	2	15-008-2902	36
150	EA	.63	2	15-008-2912	36
250	EA	.63	2	15-008-2922	36
400	EA	.93	2	15-008-2932	36
600	EA	.98	2	15-008-2942	36
800	EA	1.23	2	15-008-2952	36
1000	EA	1.86	2	15-008-2962	36
BEAKER, GRIFFIN, BOROSILICATE GLASS, LOW FORM, WITH SPOUT, CORNING 1000 OR KIMBLE 14000					
CAP. ML					
1	EA	.42	3	15-008-3102	36
5	EA	.43	23	15-008-3152	36
10	EA	.43	123	15-008-3202	36
20	EA	.42	1	15-008-3252	36
30	EA	.42	123	15-008-3302	36
50	EA	.48	1235	15-008-3352	36
100	EA	.43	1235	15-008-3402	36
150	EA	.42	1235	15-008-3412	36
250	EA	.36	1235	15-008-3422	36
400	EA	.48	1235	15-008-3432	36
600	EA	.66	1235	15-008-3442	36
800	EA	.71	5	15-008-3452	36
1000	EA	1.18	1235	15-008-3462	36
1500	EA	1.54	12 5	15-008-3472	36
2000	EA	2.05	1235	15-008-3482	36
4000	EA	4.70	1235	15-008-3502	36
BEAKER, GRIFFIN, VYCOR GLASS, LOW FORM, WITH SPOUT, NO. 11000, CORNING					
CAP. ML					
400	EA	15.84	12	15-008-3702	36
BEAKER, MICRO, BOROSILICATE GLASS, WITH LIP, NO. 1801 MICROCHEMICAL SPECIALTIES					
CAP. ML					
2 MISCO SCIENTIFIC S-4020-B	EA	.42	3	15-008-3802	36
4 MISCO SCIENTIFIC S-4020-D	EA	.50	3	15-008-3822	36
BEAKER, SAMPLE CUP, 5 ML CAP., FOR USE WITH BECKMAN G PH METER, FISHER 11-505-155 OR SARGENT S-30134					
	EA	.38	3	15-008-5102	36
BEAKER, PHILLIPS, CONICAL, BOROSILICATE GLASS, 500 ML CAP., CENCO 14275 OR CORNING 1080					
	EA	.00	2	15-008-5202	36
BEAKER, POLYPROPYLENE, LT WT, POUR-OUT SPOUT, LAPINE R21-25 SCIENTIFIC					
CAP. ML					
30	MATHESON PRODUCTS SARGENT NO.				
50 (12/PKG)	4040-05 B2730-30 S-4688D	EA	.03	1 3	15-008-7102 36
100	4040-10 B2730-50 S-4688E	EA	.00	3	15-008-7122 36
150	4040-15 B2730-100 S-4688F	EA	.18	3	15-008-7142 36
250	4040-20 B2730-150 S-4688G	EA	.22	1 3	15-008-7162 36
400	4040-25 -- --	EA	.00	12	15-008-7170 36
600	4040-30 B2730-400 S-4688J	EA	.53	123	15-008-7187 36
1000	4040-35 B2730-600 S-4688L	EA	.65	3	15-008-7202 36
	4040-40 -- --	EA	1.12	2	15-008-7542 36
BEAKER, T.P.X., CLEAR POLYOLEFIN PLASTIC, NALGE, NO. 1203					
CAP. ML					
150	MATHESON 4041-20	EA	.36	3	15-008-7802 36
250	MATHESON 4041-25	EA	1.36	3	15-008-7812 36
BEAKER, STAINLESS STEEL, GRIFFIN LOW FORM, MS 15-AA-2, TYPE 1					
CAP. ML					
125	MATHESON 3954-10 SCIENT. PROD. B2711-125 OR VWR 13977-010	EA	2.86	3	15-008-8122 36
250	MATHESON 3954-20, FSC0 2-5838 LAPINE 02143-03	EA	2.95	3	15-008-8142 36
BEAKER, STAINLESS STEEL, STRAIGHT SIDES, ROUND LIP AT TOP, WITHOUT POUR-OUT SPOUT, MS 15-AA-2, TYPE 2					
CAP. ML					
500	MATHESON 3950-10, FSC0 2-584A	EA	2.82	23	15-008-8502 36
1200	MATHESON 3950-20, FSC0 2-584B	EA	2.88	1235	15-008-8532 36
2000	MATHESON 3950-30, FSC0 2-584C	EA	3.39	23	15-008-8572 36
4000	MATHESON 3950-50, FSC0 2-584E	EA	4.63	235	15-008-8592 36
BEAKER, TEFLON, GRIFFIN, LOW FORM, WITH POUR-OUT LIP, SMOOTH SURFACED, SIZE 250 ML, SARGENT S-4694E					
	EA	3.68	2	15-008-8602	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
BOTTLE, SPECIFIC GRAVITY, ADJUSTED, VOLUME ADJUSTED AT 20 DEG C, ENGRAVED WITH CORRESPONDING NO., MATHESON					
CAP. ML PT NO.					
5 SARGENT S-9215A LAPINE 04026 4633-05	EA	.00	3	15-017-2205	36
25 SARGENT S-9215C 4633-15	EA	2.74	3	15-017-2225	36
BOTTLE, SPECIFIC GRAVITY, KIMAX, W/THERMOMETER + CAP, RANGE PLUS 14 TO 37 DEG C, 1/5 DEG SUB-DIV, 10 ML CAP., KIMBLE 15123	EA	19.22	2	15-017-2575	36
BOTTLE, SPECIFIC GRAVITY, LEACH WITH THERMOMETER AND CAP, RANGE PLUS 14 TO 37 DEG C, IN 1/5 DEG SUB-DIVS, CAP. 25 ML, KIMBLE 15123	EA	19.22	3	15-017-2605	36
BOTTLE, SPECIMEN, GLASS, WIDE MOUTH, SQUARE, WITH NO. 28 BLACK MOLDED SCREW CAP, 1 OZ CAP, (30 ML), 12/PKG, MATHESON 4363-10 OR VWR 16188-049	EA	.00	1	15-017-3505	36
BOTTLE, VACUUM, BOROSILICATE GLASS, SILVERING IN THE VACUITY, 95 MM ID X 125 MM OD X 300 MM DEEP, OVER-ALL HEIGHT INCLUDING METAL BASE 14 5/8 IN., NO. LG 7600, LABGLASS	EA	28.63	1	15-017-4505	36
BOTTLE, VIAL, CAPSULE, WITH PLASTIC SCREW CAP					
CAP. ML ODXHT MM MATHESON SARGENT NO.					
15 (4 DRAM) 28X57 63925-20 S-83245F OR VWR 66012-022	EA	.10	1235	15-017-4800	36
22 (6 DRAM) 28X70 63925-25 S-83245H OR VWR 66012-044	EA	.06	123	15-017-4805	36
35 (9 1/2 DRAM) 28X95 63925-30 S-83245L	EA	.07	1 3	15-017-4810	36
41 (11 DRAM) 28X108 63925-35 S-83245N	EA	.09	23	15-017-4815	36
BOTTLE, VIAL, CELLULOSE ACETATE, 5 ML CAP., 2 TO 2 1/2" HT X 1/2" DIA, (25 MG/CM TO THE 2ND POWER WALL), WITH GASKETED NICKEL PLATED STEEL CAP, TRACERLAB E-52			3	15-336-6800	
BOTTLE, VIAL, FOR LIQUID SCINTILLATION COUNTING, SIZE 20 ML, WITH 22 MM CAP, CAT. NO. 6000128, PACKARD INSTRUMENT CO	EA	.13	23	15-017-5010	36
BOTTLE, VIAL, FOR LIQUID SCINTILLATION COUNTING, POLYETHYLENE, SIZE 25 ML, POLYETHYLENE SCREW CAP, 500 PER CASE, NO. 6001075, PACKARD INSTRUMENT CO	EA	.09	2	15-017-5020	36
BOTTLE, VIAL, GLASS, 1 DRAM CAP., WITH POLYETHYLENE CAP, 6 GROSS PER CASE, KIMBLE NO. 60965L	CASE	35.09	2	15-017-5070	36
BOTTLE, VIAL, MIXING, POLYSTYRENE WITH POLYETHYLENE CAPS, 1 1/4 IN. DIA X 3 IN. LGTH, 60 ML CAP., NO. 6135, SPEX INDUSTRIES	EA	.16	1235	15-017-5255	36
BOTTLE, VIAL, PLASTIC, SIZE 1 IN. X 2 IN., WITH WHITE POLYETHYLENE SNAP-ON CAP, LERMER PLASTICS	EA	.05	3	15-017-5260	36
BOTTLE, VIAL, POLYSTYRENE, WITH POLYETHYLENE SLIP-ON CAP, WITH THICK CONCAVE BOTTOM, SPEX INDUSTRIES					
CAP. ML DIA IN. LGTH IN. PFR NO.					
2 1/2 X 1 3111, NO SUB	EA	.05	12 5	15-017-5263	36
5 1/2 X 2 3116, NO SUB	EA	.07	2	15-017-5266	36
BOTTLE, VIAL, POLYSTYRENE, WITH POLYETHYLENE SNAP-ON CAP, SIZE 44 MM X 86 MM, 72 PER CASE, BROCKWAY GLASS CO	EA	.13	2	15-017-5275	36
BOTTLE, VIAL, POLYSTYRENE, CLEARSITE, RIGID SHOULDER, WITH POLYETHYLENE TYPE CAP, WHICH FITS ON OUTSIDE OF VIAL SHOULDER, CELLUPLASTIC CORP					
SIZE IN.					
1/2 X 1 1/4	EA	.03	23	15-017-5280	36
1/2 X 2	EA	.03	2	15-017-5290	36
3/4 X 2	EA	.05	12 5	15-017-5305	36
1 X 2	EA	.04	2	15-017-5315	36
BOTTLE, VIAL, SPECIMEN, GLASS, SHORT STYLE, 1/2 DRAM, 12 X 35 MM, NO. 60930, KIMBLE OR APPROVED EQUAL	EA	.01	2	15-017-5490	36
BOTTLE, VIAL, SPECIMEN, GLASS, SHORT STYLE, MACHINE MADE, UNIFORM AND RETEMPERED TO REMOVE STAINS, COMPLETE WITH BLACK MOLDED SCREW CAP, NO. 60910-L, KIMBLE					
CAP. DRAM OD MM LGTH MM					
1/2 12 35	EA	.06	12	15-017-5505	36
1 15 45	EA	.08	23	15-017-5515	36
2 17 60	EA	.09	23	15-017-5525	36
8 25 95	EA	.18	1 5	15-017-5565	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
BOTTLE, VIAL, SPECIMEN, GLASS, SCREW CAP, SHORT STYLE MACHINE MADE, UNIFORM AND RETEMPERED TO RE- MOVE STAINS, COMPLETE WITH BLACK MOLDED CAP, 4 DRAM CAP., 21 MM OD, 70 MM LGTH, NO. 60910, KIMBLE	EA	.12	2	15-017-5705	36
BOTTLE, WASHING, CORNING 1660 OR KIMBLE 19135 CAP. ML S/T STOPPER NO.	EA	8.35	3	15-017-6515	36
500 24/40	EA	9.02	3	15-017-6525	36
1000 29/42					
BOTTLE, WASHING, POLYETHYLENE, COMPLETE WITH DIS- PENSING ASSY, 8 OZ CAP., NO. AC-2030, SCHAAER OR NO. 10-5160/26, PREISER	EA	.38	23	15-017-6705	36
BOTTLE, WASHING, POLYETHYLENE, 16 OZ CAP. (500 ML), MATHESON 4653-15 OR SCIENT. PROD. 87896-500 OR VWR 16651-187	EA	.42	1	15-017-6755	36
BOTTLE, WASHING, POLYETHYLENE, COLOR RED, COMPLETE WITH DISPENSING ASSY, NALGE NO. 2404					
CAP. ML NO. PER CASE					
250 (VWR 16651-722) 36	EA	.78	3	15-017-6785	36
500 (VWR 16651-744) 24	EA	.83	3	15-017-6795	36
BOTTLE, WEIGHING, HIGH FORM, WITH S/T CAP STYLE GLASS STOPPER, KIMBLE 15146					
CAP. ML S/T STOPPER					
12 19/10	EA	1.32	23	15-017-7305	36
12 29/12	EA	2.35	3	15-017-7310	36
16 29/12	EA	2.43	3	15-017-7325	36
70 45/12	EA	2.75	12	15-017-7385	36
BOTTLE, WEIGHING, HIGH FORM, WITH S/T GLASS STOPPER, K BRAND GLASS, NO. 15145, KIMBLE					
CAP. ML S/T STOPPER SIZE MM					
12 24/12 25 X 40	EA	1.55	23	15-017-7605	36
16 24/12 25 X 50	EA	1.37	3	15-017-7625	36
30 29/12 30 X 60	EA	1.51	3	15-017-7645	36
70 40/12 40X80	EA	2.53	3	15-017-7680	36
BOTTLE, WEIGHING, LOW WIDE FORM, WITH S/T GLASS STOPPER, K BRAND GLASS, 60 MM ID, 30 MM HT, NO. 15165, KIMBLE	EA	4.35	3	15-017-7805	36
BOTTLE, WIDE MOUTH, AMBER GLASS, ROUND, THREADED NECK, WITHOUT SCREW CAP, FOR BLACK ENAMELED METAL CAP, CENCO 10355					
CAP. OZ CAP NO.					
2 SARGENT XS-8300B 33					
PREISER 10-4293-02	EA	.07	2	15-017-8205	36
4 SARGENT XS-8300C 38					
VWR 16180-025	EA	.00	2	15-017-8225	36
BOTTLE, WIDE MOUTH, CLEAR GLASS, ROUND WITH MOLDED BLACK BAKELITE CAP, TOTAL HT INCL CAP NOT TO EXCEED 5 5/16 IN., DIA NOT TO EXCEED 2 7/16 IN., CAP. 8 OZ SARGENT S-9185E OR VWR 16194-063	EA	.11	12	15-017-8375	36
BOTTLE, WIDE MOUTH, CLEAR GLASS, ROUND WITH MOLDED BLACK BAKELITE CAP, BOTTLE NO. 17211 AND CAP NO. 17226, WILL CORP					
CAP. OZ GLASS CONT ASSN NO.					
2 SARGENT S-9185B 38					
VWR 16194-320	EA	.08	12	15-017-8405	36
4 SCIENT PROD AC-4 + 87505-48 48	EA	.05	2	15-017-8425	36
16 SCIENT PROD AC-16 + 87505-70 70	EA	.07	2	15-017-8465	36
32 PREISER 10-4286/04 63					
VWR 16194-100	EA	.17	123	15-017-8485	36
BOTTLE, WIDE MOUTH, CLEAR GLASS, SCREW NECK, WITH MOLDED BLACK BAKELITE CAP, BOTTLE NO. R-5150, CAP. NO. B-5225, SGA					
CAP. GLASS CONT ASSN NO.					
2 VWR 16194-020 --	EA	.09	3	15-017-8488	36
4 MATHESON 4361-20 + 4747-51 38	EA	.06	3	15-017-8489	36
VWR 16194-063 58	EA	.16	3	15-017-8491	36
8 MATHESON 4361-30 + 4747-66 70	EA	.03	3	15-017-8493	36
16 MATHESON 148-593 + 4747-72	EA	.17	3	15-017-8494	36
32 SCIENT PROD 87530-64 + 87505-83 --	EA	.36	3	15-017-8495	36
64					

Attachment B

UNIT	PRICE	STK PT	CATALOG NO	BUYER	
BULB, RUBBER, COMPLETE WITH VALVE, FOR BLOOD PRESSURE CUFF, NO. 6246-5088-01, TAYLOR INSTRUMENT CO. REPL PT	EA	3.63	1 5	15-029-6180	36
BULB, RUBBER, DOUBLE ACTION, PRESSURE OR SUCTION, NON-BLOOMING, OVAL SHAPED WITH HARD RUBBER CHECK VALVES AT BOTH ENDS, FOR RUBBER TUBING CONN, NO. 57440-10, MATHESON OR VWR 56330-000	EA	.69	1 3	15-029-6209	36
BULB, RUBBER, DROPPING BOTTLE, MEDICINE DROPPER, NO. 14-065, FISHER					
CAP. ML LGTH MM					
1 VWR 56311-027 33	EA	.00	1 3	15-029-6309	36
2 VWR 56311-049 40	EA	.04	23	15-029-6359	36
BULB, RUBBER, DROPPING BOTTLE, MEDICINE DROPPER, PIPETTE, 2 ML DISPLACEMENT, 3 ML CAP., NO. 23266, WILL CORP OR NO. S-73135, SARGENT PREISER 13-9200	EA	.00	2	15-029-6409	36
BULB, RUBBER, HEAVY DUTY, PEAR SHAPED, WITH REINFORCING RIRS, 1/4 IN. BORE, BULB DIA 2 5/8 IN., BULB LGTH 3 3/4 IN., CAP. 4 OZ, NO. 57420-10, MATHESON, SARGENT S-73165, PREISER 13-9220-07	EA	.00	1 5	15-029-6459	36
BULB, RUBBER, FOR USE WITH PIPETTES AND SYRINGES, WILL 23271					
CAP. ML LGTH IN. DIA IN.					
10 1 3/4 1 1/16 MATHESON 57410-05 PREISER 13-9220-01	EA	.09	2	15-029-6509	36
15 2 3/8 1 1/4 FSCC 14-070B	FA	.00	23	15-029-6529	36
75 4 2 PREISER 13-9220 OR MATH. 57410-20	EA	.07	2	15-029-6549	36
BULB, RUBBER, HEAVY WALL, NECK, FOR USE WITH PIPETTES + SYRINGES, FISHER 14-070 OR SARGENT S-73145C					
CAP. ML LGTH MM DIA MM					
30 70 3/8	EA	.02	23	15-029-6609	36
60 83 4/6 MATHESON 57410-15	EA	.21	1235	15-029-6659	36
BULB, RUBBER, THOMPSON ACID PUMP, NO. AL-030, BURRELL CORP OR MATHESON 135-25	EA	5.00	1	15-029-6859	36
BURETTE, AUTOMATIC, ACID, BOROSILICATE GLASS, TO FIT SCREW CAP REAGENT BTL, COMPLETE WITH PRESSURE BULB, REBASE TUBE, SPECIAL SCREWCAP WITH ADAPTOR BUT NOT ATL, NO. 5770, ACE GLASS					
CAP. ML					
100 VWR 17585-044	FA	21.29	2	15-035-0311	36
BURETTE, AUTOMATIC, BLUE LINE EXAX, RETESTED WITH THREE-WAY S/T STOPCOCK AND FILLING TUBE BENT UPWARD, 1/10 ML GRAD, KIMBLE 17051F					
CAP. ML					
25	EA	22.09	3	15-035-0511	36
50	EA	20.73	1 3	15-035-0521	36
BURETTE, AUTOMATIC, WITH S/T STOPCOCK, 32 OZ WIDE MOUTH BTL, RUBBER STOPPER, RUBBER BULB AND CONNECTING TUBE, 25 ML CAP., NO. 6360-20, MATHESON VWR 07121SP, SARGENT S-11060	EA	3.48	1	15-035-0811	36
BURETTE, AUTOMATIC, ZERO POINT BURETTE AND AIR-INLET TUBE SEALED IN FULL LGTH S/T NO. 29/42 GROUND STOPPER OF A 2000 ML BTL, BURETTE GRADUATED TO 50 ML IN 0.1 ML DIVISIONS, COMPLETE WITH ATL AND BULB, CENCO 15895, PREISER 10-R394/53 OR VWR 17590-066	EA	4.03	2	15-035-0911	36
BURETTE, DISPENSING, BLUE LINE EXAX, WITH S/T STOPCOCK, CORNING 2094 OR KIMBLE 17080-F					
CAP. ML					
250	EA	17.39	3	15-035-1411	36
500	FA	17.88	3	15-035-1421	36
BURETTE, GEISSLER, NORMAX, WITH STRAIGHT S/T STOPCOCK, KIMBLE 17031					
SUBDIVISIONS ML CAP. ML					
1/10 25	EA	13.57	3	15-035-3821	36
1/10 50	EA	14.09	3	15-035-3831	36
1/5 100	EA	15.98	3	15-035-3851	36
BURETTE, MICRO, AUTOMATIC, PYREX GLASS, S/T INTERCHANGEABLE TIPS FOR CALIBRATION AND DELIVERING, S/T JOINT NO. 24/40, BTL CAP, 1000 ML, BURETTE SIZE 10 ML, ACF GLASS 5755-24	EA	48.05	3	15-035-4411	36
BURETTE, MICRO, BLUE LINE EXAX, WITH S/T THREE-WAY STOPCOCK, 1/100 ML SUBDIVISION, 5 ML CAP., NO. 17115-F, KIMBLE	EA	22.79	3	15-035-4611	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
BURETTE, MICRO, KOCH, STD TAPER JOINTS, WITH STOPPER AND TWO TIPS, 1/100 ML DIV, NO. 20-110, FSCD					
CAP. ML					
1 VWR 17478-022	EA	.00	3	15-035-4711	36
2 VWR 17478-044	EA	8.40	3	15-035-4721	36
5 VWR 17478-066	EA	14.00	2	15-035-4731	36
BURETTE, MICRO, PRECISION BORE, KIMBLE					
CAP. ML DIV ML MFR NO.					
5 0.01 17110-F					
OR VWR 17491-020	EA	22.79	3	15-035-4756	36
5 0.01 17132-F					
WITH RESERVOIR OR VWR 17555-043	EA	32.27	3	15-035-4759	36
10 -- 17110-F					
WITH LABCREST STOPCOCK OR VWR 17491-122	EA	22.90	3	15-035-4761	36
BURETTE, MANUFACTURING CHEMIST ASSN, NO. 1, WITH FUNNEL TOP AND S/T DIAGONAL BORE STOPCOCK, 50 ML CAP., 1/10 ML SUBDIVISIONS, NO. H-6300, MARSHAW OR KIMBLE 17094-F					
	EA	22.81	3	15-035-4841	36
BURETTE, MOHR, RETESTED, BOROSILICATE, KIMBLE 17019					
CAP. ML					
25 VWR 17409-020	EA	2.77	3	15-035-4871	36
50	EA	3.60	3	15-035-4881	36
BURETTE, PRECISION BORE, WITH LABCREST TEFLON STOPCOCK, 6/PKG, KIMBLE 17026-F					
CAP. ML SUB DIV ML					
25 0.05	EA	9.21	3	15-035-5311	36
50 VWR 17454-443 0.10	EA	8.55	23	15-035-5321	36
BURETTE, PRECISION BORE, BOROSILICATE GLASS, STRAIGHT BORE STOPCOCK, WITH S/T STOPCOCK STOPPER, CORNING 2130 OR KIMBLE 17027					
CAP. ML STOPPER NO.					
50 VWR 17465-064 2	EA	11.50	123	15-035-5431	36
100 VWR 17465-086 2	EA	13.95	3	15-035-5451	36
BURETTE, POLYSTYRENE, 1/10 ML GRAD, MARSHAW					
CAP. ML MFR NO.					
25 A6-025	EA	22.79	3	15-035-6211	36
50 A6-035	EA	33.00	3	15-035-6221	36
BURNER, ALCOHOL LAMP, BRASS, WITH RATCHET, DIA OF BOTTOM 90 MM, CAP. 150 ML, NO. 4-235, FISHER					
MATHESON 6910-20, BQEKEL 1960 OR VWR 17822-004	EA	.00	3	15-038-5312	36
BURNER ASSY, HYDROGEN-OXYGEN, FOR FLAME PHOTOMETER, MED BORE, BECKMAN 4020					
	EA	83.00	3	15-038-5412	36
BURNER, BUNSEN, MICRO MIXED, NATURAL AND CYLINDER GAS, 2 1/2 IN. HT, 1/4 IN. DIA TUBE, WITH PGE TOP, MATHESON 6875-20 OR VWR 17911-002					
	EA	.00	3	15-038-5662	36
BURNER, FISHER, BLAST, COMPRESSED AIR WITH GAS, NO. 3-910-5, FSCD, MATHESON 6675-20 OR VWR 18224-008					
	EA	18.00	23	15-038-5712	36
BURNER, FISHER, HIGH TEMP, ARTIFICIAL GAS, CHROMIUM PLATED BRASS AND WHITE METAL ALLOY, NO. 3-700, FSCD, MATHESON 6610-20 OR VWR 18220-062					
	EA	.00	2	15-038-5732	36
BURNER, FORBES-BUNSEN, NATURAL GAS, NO. 3-917, FISHER OR MATHESON 6500-30					
	EA	.00	23	15-038-5812	36
CAN, STAINLESS STEEL, 22 GA, LEAK-PROOF, WITH LID AND TWO HANDLES, 10 GAL CAP.					
	EA	45.12	2	15-042-4013	36
CANDLE, STANDARD, FOR USE IN JACKSON TURBIDIMETER, RECOMMENDED BY AMERICAN PUBLIC HEALTH ASSOC, TO PROVIDE STANDARD ILLUMINATION, NC. 28816, WILL SARGENT S-14535 OR PRECISION 69764					
	EA	.00	1	15-042-6013	36
CANISTER ABSORBER, CYLINDRICAL SHAPE, PERFORATED STEEL CONSTRUCTION, WITH 5/8 IN. LAYER OF ACTIVATED COCOANUT SHELL CHARCOAL TO MEET THE FOLLOWING REQUIREMENTS -					
ACSC, 90 MIN ACTIVITY BY U S GOVERNMENT ACCELERATED CHLOROPICRIN TEST - NORMAL AIR FLOW 25 CFM					
RESISTANCE - W G 0.15 IN.					
MODEL 7-CM, BARNEBY-CHENEY CO					
	EA	15.30	3	15-043-2025	36
CAP, BOTTLE, BLACK PLASTIC, SCREW TYPE, WITH VINYLITE LINER, 63 MM DIA, SARGENT S-9610N					
	EA	.04	3	15-045-1034	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
CLEANER, LIQUID, AQUET, MUST BE NON-IONIC AND NON-TOXIC, FOR CLEANING LABORATORY GLASSWARE AND UTENSILS, 1 GAL GLASS REFILL BTL, EMIL GREINER PREISER MAN-19-090-03	BTL	.00	2	15-054-0600	36
CLEANER, PIPE, 24 PER PKG, USED AS STOPCOCK CLEANERS, MATHESON 480-20 OR PREISER 10-7130	PKG	.13	23	15-054-0630	36
CLEANER, TUBE, BOUND ON WIRE, FOR CLEANING PIPETTES, STOPCOCKS AND PLUGS, CAPILLARY TUBING, ETC, NO. 3-642, FISHER, NO. 06906, WILL					
SIZE				TUBE DIA	
A	MATHESON 6080-10			1.5 TO 3	36
B	MATHESON 6080-25			2.5 TO 5	36
C	SARGENT S-10055C			5 TO 8	36
CLOTH, POLISHING, GAMAL, 12 X 12 IN., NO. 12-2828, FISHER	EA	.93	1	15-054-0830	36
CLOTH, WOVEN, QUARTZ, NO. C-100-28, 33 IN. WIDE, 100 YD ROLL, H I THOMPSON	1 FT	3.15	3	15-054-0965	36
COIL, HIGH FREQUENCY, SIZE 14 IN. LGTH X 2 IN. DIA, WITH 6 FT. CORD AND PLUG, FOR TESTING VACUUM ASSYS FOR LEAKAGE AND EXCITING GEISSLER TUBES, NO. 80730, CENCO OR VWR 63424-001	EA	11.12	3	15-054-1570	36
COLUMN, DISTILLING, VIGREUX, MODIFIED, FRACTIONATING, PYREX GLASS, WITH MALE JOINTS WITH INTER-CHANGEABLE GROUND JOINT, 24/40 MM LGTH, OVERALL LGTH INCLUDING JOINT 22 IN., LG-5890-S, LABGLASS	EA	10.37	3	15-054-2180	36
COLUMN, LABORATORY, SEPHADEX, PHARMACIA FINE CHEMICALS, INC					
TYPE					
K 15/30	EA	32.87	2	15-054-2250	26
K 15/90	EA	38.70	2	15-054-2255	26
K 26/40 (JACKETED)	EA	62.00	2	15-054-2260	26
CONDENSER, ALLIHN, BULB TYPE, BOROSILICATE GLASS, ADAPTOR END TOOLED FOR NO. 3 STOPPER, JACKET LGTH 400 MM, NO. 2420, CORNING	EA	9.91	3	15-054-2450	36
CONDENSER, ALLIHN, DRIP TIP, BOROSILICATE GLASS, CORNING 2480 OR KIMBLE NO. 18260					
JACKET LGTH MM				OUTER AND INNER S/T JOINT NO.	
200	EA	11.58	23	15-054-2480	36
300	EA	10.71	3	15-054-2485	36
400	EA	11.41	3	15-054-2490	36
CONDENSER, ALLIHN, BOROSILICATE GLASS, INNER JOINT WITH 19/38 S/T JOINT, SIZE 250 MM, NO. 5945-05, ACE OR LABGLASS LG-4680	EA	9.66	3	15-054-2500	36
CONDENSER, FRIEDRICHS, SPIRAL INNER TUBE, BOROSILICATE GLASS, APPROX LGTH 315 MM, NO. 2580, CORNING	EA	15.47	3	15-054-2530	36
CONDENSER, GRAHAM, DRIP TIP, BOROSILICATE GLASS, CORNING 2560 OR KIMBLE 18360					
JACKET LGTH MM				OUTER AND INNER S/T JOINT NO.	
200	EA	9.83	3	15-054-2630	36
300	EA	11.33	23	15-054-2635	36
400	EA	15.08	3	15-054-2640	36
CONDENSER, LIEBIG, DRIP TIP, BOROSILICATE GLASS, CORNING 2400 OR KIMBLE 18140					
JACKET LGTH MM				OUTER AND INNER S/T JOINT NO.	
200	EA	9.87	3	15-054-2660	36
300	EA	9.59	3	15-054-2690	36
400	EA	9.93	23	15-054-2695	36
CONDENSER, WEST, DRIP TIP, BOROSILICATE GLASS, OUTER AND INNER JOINT S/T 24/40, CORNING 2800 OR KIMBLE 18190					
JACKET LGTH MM					
300	EA	7.54	2	15-054-2900	36
CONDENSER, WEST, IMPROVED TYPE, BOROSILICATE GLASS, PLAIN, ADAPTOR END TOOLED FOR NO. 3 STOPPER, JACKET LGTH 200 MM, CORNING 2700 OR KIMBLE 18160	EA	3.84	2	15-054-2955	36
CONDENSER, PYREX GLASS, IN EXACT ACCORDANCE WITH ORNL SKETCH NO. A-3	EA	4.69	3	15-054-4100	36
CONE, CENTRIFUGE, BOROSILICATE GLASS, GRADUATED 10 ML, IN 1/10 ML DIV, WITH STD JOINTS AND HOOKS, H A CUMMER	EA	4.50	3	15-054-4200	36
CONE, CENTRIFUGE, BOROSILICATE GLASS, PER ORNL DWG NO. SK-B-341, VENDOR TO FURNISH SAMPLES FOR APPROVAL PRIOR TO COMPLETION OF ORDER, DWG NO. 9980-2974, REV 1, CORNING	EA	3.20	3	15-054-4225	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
CONNECTION, HOSE, SEALING, MADE OF BOROSILICATE GLASS, SERRATED CONNECTIONS FOR RUBBER TUBING ON GLASS APPARATUS, UNIFORMLY TOOLED OF HEAVY WALL GLASS TAPERING SLIGHTLY FROM 8 TO 11 MM, LGTH APPROX 45 MM, NO. LG-9010, LABGLASS	EA	.16	23	15-054-4500	36
CONNECTOR, FLEXAFRAME, HARD ALUMINUM ALLOY, 1/2 IN. DIA, NO. 61040-10, MATHESON OR WILL 25959-04	EA	.56	123	15-054-4700	36
CONNECTOR, HOOK, FLEXAFRAME, WITH THUMBSCREW, NO. 14-666-18, FISHER, NO. 61045-10, MATHESON OR PREISER 14-3540-01	EA	.00	1	15-054-4750	36
CONNECTOR, HOSE, BRASS, CHROME OR NICKEL PLATED, STRAIGHT, SERRATED, MALE THREAD					
SIZE IN. IPS					
1/4 CONSOLIDATED BRASS 44-301, BOEKEL 1882-Y4	EA	.62	3	15-054-4775	36
3/8 MATHESON 60320-10, FSCD 14-550A	EA	1.18	3	15-054-4780	36
CONNECTOR, HOSE, BRASS, CHROME OR NICKEL PLATED, 30 DEG ANGLE, MALE THREAD, 3/8 IN. IPS, NO. 9128E, WOLVERINE BRASS WORKS OR PREISER 80-4332-01	EA	.61	3	15-054-4785	36
CONNECTOR, MULTI-CLUTCH, FLEXAFRAME, NO. 14-666-22, FSCD OR MATHESON 61056-10	EA	3.20	1	15-054-4800	36
CONNECTOR, OD, SIZE 8, NALGE 6150 OR SGA T-9500	EA	.47	1	15-054-4900	36
CONNECTOR, TWISTCOCK, POLYETHYLENE, 3 3/8 IN. OVERALL LGTH, TUBE CONNECTION 7/8 IN. LG, TAPES 3/8 IN. TO 1/4 IN., SEALS AGAINST 30 PSI, NO. 27692, WILL OR MATHESON 57876-10	EA	.00	3	15-054-4950	36
CONTAINER, LIQUID GAS, SIZE 25 LITER, NO. S-25, STANDARD AIR CO	EA	178.20	3	15-054-5228	36
CONTAINER, PLASTIC, FLEXIBLE, SQUARE, WITH LID, FOR FREEZER AND REFRIGERATOR, NEATWAY PRODUCTS					
CAP. CAT. NO. NO. PER CTN					
1 PT 1600SS-400 400	EA	.11	2	15-054-5230	36
1 QT 3000SS-200 200	EA	.14	2	15-054-5231	36
1/2 GAL 3200SS-200 200	EA	.22	2	15-054-5232	36
CONTAINER, PLASTIC, 1/4 IN. ID X 3 1/2 IN. LONG, EACH CONTAINER TO CONSIST OF ONE 3 1/2 IN. LGTH OF PLASTIC TUBING AND TWO CLOSURES, TIROS PLASTIC CORP	EA	.03	2	15-054-5234	36
CONTAINER, PLASTIC, 5/8 IN. ID X 3 1/2 IN. LGTH, EACH CONTAINER TO CONSIST OF ONE 3 IN. LGTH OF PLASTIC TUBING, AND TWO CLOSURES, TIROS PLASTIC CORP	EA	.04	2	15-054-5236	36
CONTAINER, PLASTIC, 3/4 IN. ID X 6 IN. LONG, EACH CONTAINER TO CONSIST OF ONE 6 IN. LGTH OF PLASTIC TUBING AND TWO CLOSURES, TIROS PLASTIC CORP	EA	.05	2	15-054-5238	36
CONTAINER, POLYETHYLENE, TALL FORM, 11 LITER, 47 9/16 IN. TALL, 4 7/8 IN. MAX ID, 83 MM BUTTRESS THREAD AND CAP, MS 15-AC-15A	EA	21.35	23	15-054-5240	36
CONTAINER, PLASTIC, EACH CONTAINER TO CONSIST OF ONE 6 IN. LENGTH OF PLASTIC TUBING AND TWO CLOSURES, TIROS PLASTIC CORP					
DIA IN					
1	EA	.07	2	15-054-5242	36
1 1/4	EA	.08	2	15-054-5244	36
CONTAINER, WASTE, POLYETHYLENE, APPROX DIM. TOP DIA 8 3/16 IN., BOTTOM DIA 7 IN. HT 10 IN., MS 15-AC-008					
COLOR					
WAXEY WHITE	EA	.74	2	15-054-5425	36
YELLOW	EA	1.50	2	15-054-5430	36
CONTROL, MICRO, DROP-SCALE PIPETTE, GROUND GLASS SYRINGE, SIZE 0.5 ML, NO. 290-A, MICROCHEMICAL SPECIALTIES	EA	10.50	3	15-054-5500	36
COUNTER, HAND TALLY, READS TO 9999, WITH ZERO REVERTING KNOB ON SIDE, SATIN NICKEL FINISH, NO. 4481, WILL, FISHER 7-905, LAPINE 96-71 OR SARGENT S-23285 OR VWR 14395-010	EA	2.24	23	15-054-5800	36
COVER, COMBUSTRON, CERAMIC, FOR COMBUSTRON MODEL 120 + MODEL 2-50, BURRELL CORP 24-406	EA	.08	2	15-054-7200	36
COVER, CRUCIBLE, NICKEL, FLAT STYLE, NO. 8-025, FISHER					
FOR CRUCIBLE MM					
30 PREISER 11-7170/45, LAPINE 09896-02	EA	.00	3	15-054-7390	36
50 SARGENT S-23866C	EA	.64	3	15-054-7400	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
ELECTRODE, GRAPHITE, SPECTROGRAPHIC, HIGH PURITY, SOLID ROD, MS 15-AC-70, TABLE 1					
DIA IN.					
1/8	EA	.65	3	15-080-4604	91
1/4	EA	1.03	1 3	15-080-4612	91
LGTH IN.					
12					
12					
ELECTRODE, GRAPHITE, SPECTROGRAPHIC, PYRO-CARRIER, SPECIAL PURITY, PREFORMED, MS 15-AC-12G					
FIGURE					
A (SPECIAL INSPECTION REQUIRED)	EA	.11	2	15-080-5025	91
CRATER PIECE					
F (SPECIAL INSPECTION REQUIRED)	EA	.22	2	15-080-5050	91
COUNTER ELECTRODE					
M (SPECIAL INSPECTION REQUIRED)	EA	.15	2	15-080-5075	91
CRATER PIECE					
FILM, POLYSTYRENE, 0.001 IN. THK, 2 IN. WIDE, 1 LB ROLL					
	ROLL	2.22	3	15-084-2002	36
FILTER APPARATUS, FISHER FILTRATOR, VACUUM CONTROL VALVE, COMPLETE WITH BASE, GLASS BELL, FUNNEL AND RUBBER STOPPER, BUT WITHOUT BEAKER, NO. 9-788, FSCD OR VWR 28182-006					
	EA	40.04	3	15-084-2302	36
FILTER, DEMISTER, STAINLESS, 6 IN. DIA X 6 IN. THK, MESH, ANY 300 SERIES, OTTO H YORK CO					
	EA	12.21	2	15-084-2362	36
FILTER, DISC, GLASS FIBER, 100 PER BOX, NO. 34-643, BURRELL CORP					
SIZE					
CM					
2.1 (VWR 28496-751)	BOX	.76	5	15-084-2402	36
FOR GOOCH CRUCIBLE NO.					
3					
FILTER, DISC, GLASS FIBER, 100 PER BOX, FSCD 9-873-B					
	BOX	1.90	5	15-084-2452	36
FILTER, STICK, MICRO, BOROSILICATE GLASS, 10 MM SIZE, MED POROSITY, WITH FRITTED DISC, NO. 39535, CORNING					
	EA	3.53	3	15-084-2702	36
FLASK, BOILING, BOROSILICATE GLASS, FLAT BOTTOM, RING NECK, WICKER PROTECTOR, CAP, 1000 ML, NO. 7 STOPPER, CORNING 4220 OR KIMBLE 25170					
	EA	3.55	12	15-087-1003	36
FLASK, BOILING, BOROSILICATE GLASS, FLAT BOTTOM, SHORT NECK, S/T JOINT NO. 24/40, NO. 4100, CORNING OR KIMBLE 25055					
CAP. ML					
250	EA	2.83	23	15-087-1108	36
500	EA	2.93	3	15-087-1111	36
FLASK, BOILING, BOROSILICATE GLASS, FLAT BOTTOM, VIAL MOUTH, CORNING 4060 OR KIMBLE 25000					
CAP. ML					
50	EA	1.24	3	15-087-1303	36
125	EA	.90	3	15-087-1306	36
250	EA	.66	1	15-087-1309	36
500	EA	1.33	1 3	15-087-1312	36
1000	EA	1.18	3	15-087-1315	36
6000	EA	4.63	3	15-087-1318	36
12000	EA	8.37	23	15-087-1321	36
STOPPER NO.					
1					
1					
4					
5					
7					
10					
10					
FLASK, BOILING, BOROSILICATE GLASS, ROUND BOTTOM, LONG NECK					
CAP. ML					
50	EA	3.16	23	15-087-1503	36
100	EA	2.66	23	15-087-1508	36
300	EA	3.92	3	15-087-1518	36
500	EA	2.82	23	15-087-1521	36
1000	EA	5.02	3	15-087-1603	36
2000	EA	4.95	3	15-087-1608	36
S/T JOINT NO.					
19/38					
24/40					
24/40					
24/40					
29/42					
29/42					
CORNING NO.					
93245					
4300					
93245					
4300					
93245					
93245					
KIMBLE NO.					
--					
25275					
--					
25275					
--					
FLASK, BOILING, BOROSILICATE GLASS, ROUND BOTTOM, SHORT NECK, S/T JOINT 24/40, CORNING 4320 OR KIMBLE 25285					
CAP. ML					
100	EA	2.28	2	15-087-1803	36
200	EA	2.46	3	15-087-1805	36
250	EA	2.42	12	15-087-1808	36
300	EA	2.45	2	15-087-1811	36
500	EA	2.66	2	15-087-1814	36
1000	EA	3.52	2	15-087-1815	36
FLASK, BOILING, BOROSILICATE GLASS, ROUND BOTTOM, SHORT NECK, S/T JOINT NO. 29/42, CAP. 1000 ML, NO. 4321 CORNING OR KIMBLE 25290					
	EA	3.23	2	15-087-2003	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
FLASK, BOILING, BOROSILICATE GLASS, ROUND BOTTOM, SHORT RING NECK, CORNING 4260 OR KIMBLE 25270					
CAP. ML					
200	EA	1.19	3	15-087-2203	36
500	EA	2.27	23	15-087-2208	36
1000	EA	2.96	3	15-087-2211	36
2000	EA	2.24	35	15-087-2214	36
5000	EA	4.14	23	15-087-2220	36
FLASK, BOILING, BOROSILICATE GLASS, ROUND BOTTOM, VIAL MOUTH, CORNING 4280 OR KIMBLE 25200					
CAP. ML					
				STOPPER NO.	
25				1	
50	EA	.62	23	15-087-2409	36
100	EA	.81	23	15-087-2412	36
200	EA	.72	2	15-087-2415	36
300	EA	.75	2	15-087-2418	36
500	EA	1.18	3	15-087-2421	36
1000	EA	.65	23	15-087-2424	36
2000	EA	1.72	3	15-087-2427	36
	EA	2.41	1	15-087-2430	36
FLASK, BOILING, VITREOSIL, PLAIN, ROUND BOTTOM, TRANSPARENT, THERMAL SYNDICATE LTD					
CAP. ML					
250	EA	11.72	3	15-087-2807	97
500	EA	18.70	3	15-087-2811	97
FLASK, CULTURE, 250 ML, WITH SCREW CAP, 20 PKG PER CASE, NO. 3024, FALCON PLASTIC					
	CASE	40.87	2	15-087-3005	36
FLASK, DISTILLING, BOROSILICATE GLASS, CLAISEN, CAP, 250 ML, CORNING 4740 OR KIMBLE 26070					
	EA	4.75	3	15-087-3905	36
FLASK, DISTILLING, BOROSILICATE GLASS, NO. 4620, CORNING OR KIMBLE 26015					
CAP. ML					
				STOPPER NO.	
50				1	
125	EA	1.07	3	15-087-4206	36
250	EA	2.36	3	15-087-4209	36
1000	EA	1.59	3	15-087-4212	36
	EA	2.23	3	15-087-4218	36
FLASK, DISTILLING, BOROSILICATE GLASS, TWO NECK, S/T JOINTS, CORNING 4967					
CAP. ML					
				JOINT NO.	
				CENTER SIDES	
500				34/45 24/40	
1000	EA	8.66	3	15-087-4403	36
2000	EA	9.94	3	15-087-4406	36
	EA	11.17	23	15-087-4408	36
FLASK, DISTILLING, BOROSILICATE GLASS, TWO NECK, CAP, 3000 ML, S/T JOINTS, CENTER JOINT 29/42, SIDE JOINT 24/40, LABGLASS LG-7290-318 OR ACE 6925-36					
	EA	11.72	3	15-087-4410	36
FLASK, DISTILLING, BOROSILICATE GLASS, THREE NECK, S/T JOINTS					
CAP. ML					
				JOINT NO.	
				CENTER SIDES	
500				34/45 24/40	
1000	EA	10.51	2	15-087-4753	36
2000	EA	13.01	23	15-087-4756	36
3000	EA	14.71	3	15-087-4759	36
5000	EA	11.50	2	15-087-4762	36
10000	EA	20.01	3	15-087-4769	36
20000	EA	19.62	3	15-087-4768	36
FLASK, DISTILLING, BOROSILICATE GLASS, THREE NECK, ANGLE TYPE, S/T JOINTS					
CAP. ML					
				JOINT NO.	
				CENTER SIDES	
100				24/40 19/38	
200	EA	7.16	3	15-087-4803	36
300	EA	9.57	3	15-087-4806	36
500	EA	10.03	3	15-087-4809	36
1000	EA	9.89	3	15-087-4812	36
	EA	13.02	3	15-087-4815	36
FLASK, ERLLENMEYER, BOROSILICATE GLASS, NARROW MOUTH, CORNING 4980 OR KIMBLE 26500					
CAP. ML					
				STOPPER NO.	
10				00	
25	EA	.90	23	15-087-7203	36
50	EA	.53	23	15-087-7206	36
125	EA	.45	23	15-087-7209	36
250	EA	.43	23	15-087-7212	36
500	EA	.45	123	15-087-7218	36
1000	EA	.68	23	15-087-7224	36
2000	EA	1.13	123	15-087-7227	36
3000	EA	1.86	23	15-087-7230	36
4000	EA	3.03	2	15-087-7233	36
6000	EA	4.18	2	15-087-7236	36
	EA	5.46	23	15-087-7239	36

Attachment B

		UNIT	PRICE	STK PT	CATALOG NO	BUYER
FLASK, ERLLENMEYER, BOROSILICATE GLASS, NARROW MOUTH, WITH PENNY HEAD, S/T STOPPER, NO. 5020, CORNING OR KIMBLE 26600						
CAP.	STOPPER NO.					
ML	9	EA	1.86	3	15-087-7595	36
10	16	EA	1.90	23	15-087-7603	36
25	19	EA	1.96	23	15-087-7605	36
50	22	EA	2.78	23	15-087-7607	36
125	27	EA	2.56	123	15-087-7609	36
250	32	EA	3.45	23	15-087-7611	36
500	32	EA	4.88	3	15-087-7614	36
1000						
FLASK, ERLLENMEYER, BOROSILICATE GLASS, NARROW MOUTH, SOCKET JOINT						
CAP. ML	JOINT NO.					
125	19/38	EA	1.91	3	15-087-7816	36
	LABGLASS LG-7750					
FLASK, ERLLENMEYER, BOROSILICATE GLASS, WIDE MOUTH, CORNING 5100 OR KIMBLE 26650						
CAP.	STOPPER NO.					
ML	10					
500	11	EA	.69	123	15-087-7856	36
1000	13	EA	1.37	23	15-087-7859	36
2000		EA	1.75	2	15-087-7861	36
FLASK, FILTERING, BOROSILICATE GLASS, HEAVY WALL, WITH TUBULATION, CORNING 5340 OR KIMBLE 27060						
CAP.	STOPPER NO.					
ML	6	EA	1.58	23	15-090-0504	36
250	7	EA	2.15	1235	15-090-0507	36
500	8	EA	3.46	23	15-090-0510	36
1000	9	EA	6.31	23	15-090-0513	36
2000	12	EA	10.10	123	15-090-0516	36
4000						
FLASK, FILTERING, BOROSILICATE GLASS, HEAVY WALL, WITH REPLACEABLE TUBULATIONS. NO. 5341, CORNING OR KIMBLE 27065						
CAP.	STOPPER NO.					
ML	6					
250	7	EA	2.75	3	15-090-0540	36
500	8	EA	2.56	3	15-090-0545	36
1.000		EA	3.99	3	15-090-0550	36
FLASK, FILTERING, BOROSILICATE GLASS, MICRO, WITH TUBULATION, CORNING 5360 OR KIMBLE 27060						
CAP.	STOPPER NO.					
ML	3	EA	1.94	23	15-090-0704	36
25	4	EA	1.44	23	15-090-0710	36
50	5	EA	1.50	23	15-090-0713	36
125						
FLASK, IODINE DETERMINATION, BOROSILICATE GLASS, WITH S/T STOPPER NO. 22, CORNING 5400 OR KIMBLE 27200						
CAP. ML						
125		EA	3.39	3	15-090-1504	36
250		EA	5.54	3	15-090-1508	36
FLASK, KJELDAHL, BOROSILICATE GLASS, ROUND BOTTOM, LONG NECK, CORNING 5420 OR KIMBLE 27400						
CAP.	STOPPER NO.					
ML	2					
100	7	EA	1.17	3	15-090-1690	36
800		EA	2.23	23	15-090-1745	36
FLASK, VACUUM, DEWAR, CYLINDRICAL, BOROSILICATE GLASS UNSILVERED AND UNEVACUATED, WITH TUBULATION FOR EXHAUSTING, CORNING 4540						
CAP. ML						
950		EA	6.31	3	15-090-7105	36
FLASK, VACUUM, DEWAR, CYLINDRICAL, BOROSILICATE GLASS, COMPLETE, SILVERED AND EVACUATED, NO. 4560, CORNING PYREX						
CAP	APPROX INNER TUBE					
ML	OD IN.					
450	2	EA	21.04	3	15-090-7209	36
	10					
FLASK, VACUUM, DEWAR, CYLINDRICAL, WIDE MOUTH, GLASS, SILVERED AND EVACUATED, WITH METAL CASE, WITHOUT CAP AND STOPPER, 10 OZ CAP., TYPE 7063 AMERICAN THERMOS BOTTLE						
		EA	3.01	1	15-090-7254	36
FLASK, VACUUM, DEWAR, CYLINDRICAL, BOROSILICATE GLASS SILVERED AND EVACUATED, WITH METAL SUPPORT, AMERICAN THERMOS BOTTLE						
CAP. CC	OVERALL SIZE IN.					
265	2 15/16 X 5 7/8	EA	9.69	1235	15-090-7404	36
665	3 1/4 X 9 1/4	EA	14.21	1235	15-090-7409	36
1000	3 3/8 X 13 3/8	EA	11.33	1235	15-090-7414	36
1900	5 7/8 X 10	EA	21.08	1235	15-090-7434	36

Attachment B

		UNIT	PRICE	STK PT	CATALOG NO	BUYER
FLASK, VACUUM, DEWAR, FLASK SHAPE, BOROSILICATE GLASS SILVERED AND EVACUATED, WITH METAL SUPPORT, AMERICAN THERMOS BOTTLE						
CAP. ML	MFR NO.					
750	8692	EA	37.79	3	15-090-7604	36
1600	8694	EA	46.11	123	15-090-7614	36
4200	8696	EA	43.38	1 35	15-090-7624	36
FLASK, VACUUM, DEWAR, WIDE MOUTH, BOROSILICATE GLASS, SILVERED AND EVACUATED, WITH ALUMINUM METAL STAND, 2950 ML CAP., 120 MM ID, 150 MM OD, 300 MM DEPTH, NO. M-20310, H S MARTIN, OR NO. 30028, POPE SCIENTIFIC, INC						
		EA	48.62	2	15-090-7704	36
FLASK, VACUUM, THERMOS, PYREX GLASS, SILVERED WITH ASBESTOS SEPARATION PADS BETWEEN WALLS AND ALUMINUM BASE, AMERICAN THERMOS BOTTLE						
CAP. CC	MFR NO.					
845	8677	EA	11.65	1	15-090-7904	36
4300	8642	EA	27.51	123	15-090-7924	36
FLASK, VOLUMETRIC, EXAX BLUE LINE, RETESTED, WITH S/T STOPPER 9, 10 ML CAP., CORNING 5641-KIMBLE 28015						
		EA	2.46	3	15-090-8204	36
FLASK, VOLUMETRIC, NORMAX, PRECISION, GRADUATED, WITH S/T STOPPER, CORNING 5680 OR KIMBLE 28017						
CAP. ML	TOL ML	STOPPER NO.				
25	0.03	9	EA	4.12	2	15-090-8439 36
50	0.05	9	EA	4.66	123	15-090-8444 36
100	0.08	13	EA	4.71	123	15-090-8449 36
200	0.10	13	EA	5.07	1	15-090-8454 36
250	0.12	16	EA	5.79	1235	15-090-8459 36
500	0.15	19	EA	7.09	1 35	15-090-8464 36
1000	0.30	19	EA	8.43	1 35	15-090-8469 36
2000	0.50	27	EA	13.20	1	15-090-8474 36
FLASK, VOLUMETRIC, PYREX GLASS, WITH S/T STOPPER, CLASS A, CORNING 5640 OR KIMBLE 28014						
CAP. ML	STOPPER NO.					
1	8	EA	2.13	3	15-090-8604	36
2	8	EA	2.01	23	15-090-8607	36
5	8	EA	2.48	23	15-090-8610	36
10	9	EA	2.95	23	15-090-8613	36
25	9	EA	3.34	235	15-090-8616	36
50	9	EA	3.40	235	15-090-8619	36
100	13	EA	3.90	1235	15-090-8622	36
200	13	EA	4.31	23	15-090-8625	36
250	16	EA	4.98	123	15-090-8628	36
500	16	EA	16.68	123	15-090-8631	36
1000	22	EA	7.53	123	15-090-8634	36
2000	27	EA	7.95	23	15-090-8637	36
FLASK, VOLUMETRIC, PYREX GLASS, CLASS A, SCREW CAP, COMPLETE WITH THREAD SCREW CAPS HAVING A CONE SHAPE POLYETHYLENE POLY-SEAL LINER, NO. 5650, CORNING						
CAP. ML	THREAD FINISH					
25	410-18	EA	2.56	2	15-090-8704	36
50	410-18	EA	2.76	2	15-090-8714	36
100	410-18	EA	2.86	2	15-090-8724	36
FLASK, VOLUMETRIC, PYREX, SAYBOLT, VISCOSIMETER, 60 ML CAP., CORNING 5860 OR KIMBLE 28126						
		EA	2.16	23	15-090-8844	36
FORCEPS, BALANCE WEIGHT, PLASTIC TIPPED, CURVED, MATHESON 3505-20						
		EA	.18	123	15-093-2205	36
FORCEPS, BOTTLE, STAINLESS STEEL, 250 MM LGTH, NO. S-35277, SARGENT, OR FSCD 10-3168						
		EA	1.82	3	15-093-2215	36
FORCEPS, COVER GLASS, WITH BENT ENDS, CHROME PLATED, STEEL, 4 1/2 IN. L, SARGENT S-35195, VWR 30015-007						
		EA	.32	23	15-093-2225	36
FORCEPS, DISSECTING, FINE CURVED POINTS, NICKEL PLATED FURGED STEEL, 115 MM LGTH, NO. 19520-10, MATHESON, SCIENT. PROD D2564						
		EA	.34	23	15-093-2250	36
FORCEPS, DISSECTING, FINE STRAIGHT POINTS, NICKEL PLATED FORGED STEEL, 115 MM LGTH, NO. 19500-10, MATHESON						
		EA	.27	23	15-093-2255	36
FORCEPS, DISSECTING, HEAVY STRAIGHT BROAD POINTS, NICKEL PLATED STEEL, BROAD SERRATIONS ON HANDLE, FINE SERRATIONS ON TIPS, 125 MM LGTH, SARGENT S-26515 OR VWR 25722-005						
		EA	.12	23	15-093-2260	36
FORCEPS, DISSECTING, MEDIUM CURVED POINTS, NICKEL PLATED STEEL, HIGHLY POLISHED, WITH INSIDE OF POINTS FILE CUT, 115 MM LGTH, NO. 8-882, FISHER OR PRIFISER 12-2510 OR MATHESON 19522-10						
		EA	.09	12 5	15-093-2265	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
FORCEPS, DISSECTING, STUDENT, FINE STRAIGHT POINTS, NICKEL PLATED STEEL, WITHOUT SERRATIONS ON TIPS AND HANDLE, 120 MM LGTH, NO. 19570-10, MATHESON, OR FSCO 8-902 OR VWR 25728-001	EA	.00	23	15-093-2270	36
FORCEPS, KELLEY MEMOSTAT, CHROME PLATED, STRAIGHT, BOX LOCK, 5 1/2 IN. LGTH, NO. 5026, KAY SURGICAL FSCO 8-907 OR VWR 25881-009	EA	2.11	123	15-093-2705	36
FORCEPS, MICRO, SWISS STYLE, WATCHMAKERS TYPE, FINE POINTS, SS, 4 1/8 IN. LGTH, NO. A-1905, CLAY ADAMS, REPL PT	EA	3.68	1	15-093-2805	36
FORCEPS, SPECIMEN JAR, NICKEL PLATED STEEL, TIPS ROUNDED AND FILE CUT, NO. 10-316, FISHER LGTH MM					
150 (MATHESON 19545-101)	EA	.20	12	15-093-2850	36
175 (MATHESON 19545-201)	EA	.00	2	15-093-2855	36
250 LAPINE 10951-02, PREISER 12-7542-28	EA	1.04	12 5	15-093-2860	36
300 LAPINE 10951-03, PREISER 12-7542-30	EA	2.07	23	15-093-2865	36
FORCEPS, STRAIGHT, STAINLESS STEEL, PLATINUM TIPPED, 127 MM LGTH, FISHER 10-285 OR SARGENT S-35185 ENGELHARD 507 OR VWR 30049-009	EA	37.20	23	15-093-2915	36
FORCEPS, TISSUE, STRAIGHT MOUSE TOOTH TIPS, NICKEL PLATED FORGED STEEL, 115 MM LGTH, NO. 19560-10, MATHESON OR VWR 30010-003	EA	.21	23	15-093-2935	36
FORCEPS, UTILITY, STAINLESS STEEL, ALL PURPOSE, 140 MM LGTH, VWR 25719-066	EA	.52	123	15-093-2965	36
FUNNEL, ANALYTICAL, POLYPROPYLENE, FOR ORGANIC SOLVENTS AND STRONG ACIDS AND BASES, 65 MM ID, 65 MM STEM LGTH, FOR 110 MM FILTER PAPER, 36 PER CASE, WILL 14192, MATHESON 25099-25	EA	.26	3	15-096-0250	36
FUNNEL, BUCHNER, POLYETHYLENE, 70 MM DIA, FOR FILTER PAPER, MATHESON 25237-10	EA	2.45	3	15-096-0306	36
FUNNEL, BUCHNER, PORCELAIN, WITH FIXED PERFORATED PLATE, GLAZED INSIDE AND OUTSIDE WITH EXCEPTION OF RIM					
SIZE ID PERF AREA OVERALL COORS					
NO. MM DIA MM HT MM NO.					
0 42 32 89 49002	EA	2.49	23	15-096-0506	36
1 56 45 101 49003	EA	3.02	123	15-096-0509	36
2 75 60 143 49005	EA	5.43	23	15-096-0512	36
2A 91 80 160 49006	EA	6.49	23	15-096-0515	36
3 111 98 195 49007	EA	7.16	3	15-096-0518	36
4 126 115 202 49008	EA	12.82	3	15-096-0521	36
4A 151 139 221 49009	EA	14.87	3	15-096-0524	36
5 186 173 270 49010	EA	18.08	2	15-096-0527	36
6 241 226 350 49011	EA	33.93	23	15-096-0530	36
FUNNEL, BUCHNER, PYREX GLASS, CAP. 450 ML, B POROSITY, WITH ACE FIBER GLASS FILTER DISC, 90 MM, NO. 7186-64, ACE GLASS OR LABGLASS NO. LG-7080-S	EA	21.50	3	15-096-0705	36
FUNNEL, BUCHNER, PYREX GLASS, WITH FRITTED DISC, CORNING 36060 OR KIMBLE 28400					
CAP. HT MM DISC					
ML POROSITY ABOVE DISC DIA MM					
15 MEDIUM 45 20	EA	4.42	3	15-096-0755	36
30 COARSE 45 30	EA	4.98	23	15-096-0805	36
30 MEDIUM 45 30	EA	4.80	3	15-096-0808	36
30 FINE 45 30	EA	4.09	23	15-096-0811	36
60 COARSE 50 40	EA	5.82	5	15-096-0814	36
60 MEDIUM 50 40	EA	5.50	123	15-096-0817	36
60 FINE 50 40	EA	5.36	3	15-096-0820	36
150 COARSE 50 60	EA	9.00	23	15-096-0823	36
150 MEDIUM 50 60	EA	8.99	23	15-096-0826	36
150 FINE 50 60	EA	8.11	23	15-096-0829	36
350 COARSE 75 80	EA	11.22	23	15-096-0832	36
350 MEDIUM 75 80	EA	12.53	23	15-096-0835	36
350 FINE 75 80	EA	11.22	3	15-096-0838	36
600 COARSE 90 90	EA	13.45	1	15-096-0841	36
600 MEDIUM 90 90	EA	13.45	12	15-096-0844	36
600 FINE 90 90	EA	13.46	1	15-096-0847	36
FUNNEL, BUCHNER, PYREX GLASS, WITH FRITTED DISC, ACE GLASS					
CAP. POROSITY HT MM DISC					
ML MICRONS ABOVE DISC DIA MM ACE NO.					
2500 (A) 145-175 150 150 7186-82	EA	47.47	2	15-096-0867	36
FUNNEL, BURETTE, GLASS, 40 MM DIA, 40 MM STEM LGTH, PREISER 10-8550 OR MATHESON 6430-10	EA	.12	3	15-096-1005	36
FUNNEL, FLUTED, BOROSILICATE GLASS, ACCURATE 60 DEG, LONG STEM, LGTH OF STEM 150 MM, NO. 6160, CORNING DIA MM					
50	EA	.60	23	15-096-1505	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
-CONTINUED-					
FUNNEL, FLUTED, BOROSILICATE GLASS, ACCURATE 60 DEG, LONG STEM, LGTH OF STEM 150 MM, NO. 6160, CORNING DIA MM					
65	EA	.68	1 3	15-096-1510	36
75	EA	.93	1235	15-096-1515	36
100	EA	.97	235	15-096-1520	36
FUNNEL, FLUTED, BOROSILICATE GLASS, ACCURATE 60 DEG, NO. 6180, CORNING PYREX					
DIA MM					
50	EA	.58	1	15-096-1560	36
75	EA	1.00	1	15-096-1565	36
SHORT STEM LGTH MM					
65					
75					
FUNNEL, HIRSCH, PORCELAIN, WITH FIXED PERFORATED PLATE					
SIZE	TAP DIA	PLATE	COORS		
NO.	MM	DIA MM	NO.		
0000	55	16	51002	EA	2.06 23 15-096-1805 36
000	50	31	51003	EA	2.10 3 15-096-1807 36
FUNNEL, MICRO FILTER TUBE, BOROSILICATE GLASS, WITH FRITTED DISC, 3 MM TOP DIA, CORNING 36290 OR KIMBLE 28450					
POROSITY					
MEDIUM	EA	3.69	3	15-096-2206	36
FINE	EA	3.63	3	15-096-2207	36
FUNNEL, PLAIN, GLASS, KIMBLE 58, SHORT STEM, NO. 28950, KIMBLE					
STEM LGTH MM			DIA MM		
50			45	EA	.42 23 15-096-2505 36
60			55	EA	.60 23 15-096-2515 36
FUNNEL, PLAIN, GLASS, LONG STEM, SIDE ANGLE 60 DEG, 150 MM STEM LGTH, NO. 28900, KIMBLE					
DIA MM					
55	EA	.57	23	15-096-2605	36
65	EA	.68	3	15-096-2610	36
100	EA	1.64	3	15-096-2615	36
FUNNEL, PLAIN, GLASS, SHORT STEM, SIDE ANGLE 60 DEG, NO. 29000, KIMBLE					
DIA			STEM LGTH		
MM			MM		
25	EA	.56	23	15-096-2805	36
250	EA	8.97	2	15-096-2820	36
FUNNEL, PLAIN, GLASS, 60 DEG STEM LGTH IN. DIA IN. CORNING NO. KIMBLE NO.					
4	5	6120	28960	EA	2.01 235 15-096-2880 36
4	6	6120	28960	EA	1.84 12 15-096-2885 36
6	6	6100	28900	EA	2.64 1 15-096-2895 36
FUNNEL, PLAIN, GLASS, ACCURATE 60 DEG, LONG STEM, 150 MM STEM LGTH, NO. 6140, CORNING OR KIMBLE 28900					
DIA MM					
50	EA	.71	3	15-096-3205	36
75	EA	.74	3	15-096-3210	36
100	EA	.92	23	15-096-3215	36
FUNNEL, POLYETHYLENE, 4 IN. DIA, SCHAAR 14228 FSCD 10-371C OR MATHESON 25097-20					
	EA	.00	12	15-096-3410	36
FUNNEL, POLYETHYLENE, 6 IN. DIA, VWR 30251-101					
	EA	.37	23	15-096-3415	36
FUNNEL, POLYETHYLENE, 8 IN. DIA, WILL 14228, MATHESON 25097-40, OR SARGENT S-35431F					
	EA	.00	2	15-096-3420	36
FUNNEL, POWDER, GLASS, WITH SHORT WIDE STEM AND FIRE POLISHED TOP AND STEM, 60 MM DIA, 14 MM STEM DIA, 25 MM STEM LGTH, NO. 29020, KIMBLE					
	EA	.70	123	15-096-3605	36
FUNNEL, RIBBED, MOLDED GLASS, SHORT STEM, 32 OZ CAP., 7 1/4 IN. DIA, SARGENT S-35385-E OR FSCD 10-381-D					
	EA	.00	2	15-099-0506	36
FUNNEL, SEPARATORY, CYL SHAPE, OPEN TOP AND LONG STEM WITH S/T STOPCOCK, CORNING 6420 OR KIMBLE 29028 CAP. ML					
125	EA	6.22	3	15-099-1006	36
250	EA	6.85	3	15-099-1016	36
FUNNEL, SEPARATORY, CYLINDRICAL, OPEN TOP, CAP. 200 ML, S/T STOPCOCK NO. 3, NO. LG-8320-S, LABGLASS					
	EA	6.83	3	15-099-1043	36
FUNNEL, SEPARATORY, CYL SHAPE, BOROSILICATE GLASS, OPEN TOP, CAP. 250 ML, WITH NO. 4 S/T STOPCOCK, CORNING 6420					
	EA	7.70	3	15-099-1059	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
FUNNEL, SEPARATORY, CYL SHAPE, WITH S/T STOPCOCK AND STOPPER, CORNING 6380 OR KIMBLE 29033					
CAP. ML STOPCOCK NO. STOPPER NO.					
250 2 16	EA	9.30	3	15-099-1106	36
1000 4 22	EA	13.01	3	15-099-1116	36
FUNNEL, SEPARATORY, GLOBE SHAPE WITH S/T STOPCOCK AND STOPPER, CORNING 6340 OR KIMBLE 29043					
CAP. ML STOPCOCK STOPPER NO. FUNNEL STOPPER NO.					
60 2 13	EA	3.19	3	15-099-1406	36
125 2 13	EA	7.76	3	15-099-1411	36
250 2 16	EA	9.13	3	15-099-1416	36
500 4 19	EA	10.94	3	15-099-1421	36
1000 4 22	EA	.00	3	15-099-1426	36
2000 6 27	EA	23.02	23	15-099-1431	36
FUNNEL, SEPARATORY, PEAR SHAPE, SQUIBB, BOROSILICATE GLASS, WITH GROUND GLASS STOPPER, 30 ML CAP., NO. LG-8420, LABGLASS					
	EA	4.40	23	15-099-1506	36
FUNNEL, SEPARATORY, PEAR SHAPE, SQUIBB, WITH S/T STOPCOCK AND STOPPER, CORNING 6400 OR KIMBLE 29048					
CAP. ML STOPCOCK STOPPER NO. FUNNEL STOPPER NO.					
60 2 16	EA	5.80	23	15-099-2016	36
125 2 22	EA	6.97	3	15-099-2021	36
250 2 22	EA	8.49	12	15-099-2026	36
500 4 27	EA	9.88	2	15-099-2031	36
1000 4 27	EA	13.01	12	15-099-2036	36
2000 6 38	EA	20.75	12	15-099-2041	36
FUNNEL, SEPARATORY, CENTRIFUGAL, BOROSILICATE GLASS, CYLINDRICAL SHAPE, WITH TEFLON STOPCOCK AND SCREW CAP TOP, TYPE K-4525-M, KONTES					
CAP. ML					
30	EA	7.78	3	15-099-2200	36
60	EA	7.78	3	15-099-2210	36
100	EA	7.75	3	15-099-2220	36
250	EA	8.99	23	15-099-2230	36
FUNNEL, SEPARATORY, BOROSILICATE GLASS, CAP. 125 ML, TEFLON VALVE, TYPE K-4535, KONTES					
	EA	7.78	3	15-099-2306	36
FUNNEL, SEPARATORY, SQUIBB TYPE, CAP. 125 ML, WITH STRAIGHT BORE GYCO STOPCOCK, NO. JF-8874, SGA					
	EA	8.95	1	15-099-3000	36
GAS, COMPRESSED, EFFA DUSTER REFILL, MICROSCOPICALLY CLEAN, 15 OZ CAN, NO. 1168, ERNEST F FULLAM, INC					
	CAN	1.34	2	15-102-0300	36
GAUGE, MCLEOD, BOROSILICATE GLASS, RANGE 0-5, IMPROVED FROM INTER-JOINT, COMPLETE, CAP. OF FLASK 500 ML, S/T JOINT NO. 24/40, NO. JV-2490, SGA					
	EA	108.74	3	15-106-0927	36
GLASS, COVER, SQUARE, NO. 1 THICKNESS, SIZE 22 MM, TEN 1 OZ BOXES PER PKG, NO. 2865, CORNING, <u>NO SUB</u>					
	BOX	2.41	2	15-106-1395	36
GLASS, COVER, RECTANGULAR, NO. 1 THICKNESS, TEN 1 OZ BOXES PER PKG, NO. 2935, CORNING, <u>NO SUB</u>					
SIZE MM					
22 X 30	BOX	2.77	2	15-106-1502	36
22 X 40 (NO SUB AT Y-12)	BOX	2.24	23	15-106-1507	36
22 X 50	BOX	2.41	2	15-106-1512	36
22 X 60	BOX	2.40	2	15-106-1515	36
24 X 50	BOX	2.40	2	15-106-1519	36
24 X 60	BOX	2.40	2	15-106-1524	36
GLASS, COVER, MICRO, NON-CORROSIVE, ROUND, NO. 2, 18 MM DIA, THICKNESS RANGE 0.17 TO 0.25 MM, 1/2 OZ BOX, NO. 2915, CORNING					
	BOX	3.64	3	15-106-1557	36
GLASS, COVER, MICRO, NON-CORROSIVE, 1 OZ BOX, A H THOMAS					
SHAPE SIZE MM MFR NO.					
ROUND 22 (DIA) 7022 RED LABEL NO. 2	BOX	5.78	23	15-106-1577	36
SQUARE 18 7020 RED LABEL NO. 1	BOX	1.18	3	15-106-1587	36
SQUARE 22 7020 RED LABEL NO. 1, OR VWR 48366-067	BOX	1.16	2	15-106-1590	36
SQUARE 25 7020 RED LABEL NO. 1 OR VWR 48366-089	BOX	.00	3	15-106-1593	36
GLAZE, LABEL, 4 OZ BTL, FSC0 11-880, OR VWR 36419-701					
	BTL	.00	1	15-106-2807	36
GRADUATE, BEAKER, BOROSILICATE GLASS, DOUBLE SPOUT, DOUBLE SCALE, NO. 6480, CORNING PYREX					
CAP. ML					
500	EA	5.28	1	15-106-4217	36
GRADUATE, PHARMACEUTICAL, GLASS, BLUE LINE EXAX, RE-TESTED, SINGLE METRIC SCALE, NO. 60340, KIMBLE					
CAP. ML					
5	EA	2.65	3	15-106-4707	36
10	EA	4.17	3	15-106-4710	36

			UNIT	PRICE	STK PT	CATALOG NO	BUYER
PIPETTE, MICRO, TRANSFER TYPE, PYREX GLASS, SELF-FILLING, MICROCHEMICAL SPECIALTIES CO							
CAP. LAMBDA	SERIES NO.						
1	MCA-1		EA	2.16	3	15-169-4740	36
2	MCA-2		EA	1.70	3	15-169-4750	36
6	MCA-6		EA	1.70	3	15-169-4770	36
7	MCA-7		EA	2.50	3	15-169-4775	36
10	MCA-10		EA	2.40	3	15-169-4785	36
PIPETTE, PASTEUR CAPILLARY, DISPOSABLE, OVERALL LGTH 5 3/4 IN., CAPILLARY 2 1/4 IN. LGTH X 1/2 MM ID, BODY 3 1/2 IN. LGTH X 7 MM OD, 2 1/2 GROSS PER BOX, MATHESON 55698-00 OR VWR 14672-029							
			BOX	2.98	2	15-169-5350	36
PIPETTE, SEROLOGICAL, BLUE LINE EXAX, RETESTED, NO. 37034, KIMBLE							
CAP. ML	SUB DIV ML						
0.1	0.01		EA	1.09	2	15-169-6205	36
0.2	0.01		EA	1.33	2	15-169-6210	36
1	0.1		EA	1.08	23	15-169-6215	36
2	0.1		EA	1.21	3	15-169-6225	36
5	0.1		EA	1.21	23	15-169-6230	36
10	0.1		EA	1.71	23	15-169-6235	36
PIPETTE, SEROLOGICAL, INTERVAL, CORNING 7085 OR KIMBLE 37033							
CAP. ML	COLOR CODED	GRAD ML					
1	YELLOW	1/100	EA	1.00	2	15-169-6405	36
5	BLUE	1/10	EA	1.00	2	15-169-6415	36
10	ORANGE	1/10	EA	1.14	2	15-169-6420	36
PIPETTE, SEROLOGICAL, POLYPROPYLENE, ALL SIZES 0.10 ML SUBDIV., NALGE 3610, DYNALAB 1100							
CAP. ML							
1.0	MATHESON 55653-20		EA	1.97	3	15-169-6605	36
2.0	MATHESON 55653-30		EA	1.85	3	15-169-6610	36
5.0	MATHESON 55653-40		EA	2.15	3	15-169-6615	36
10.0	MATHESON 55653-45		EA	2.32	3	15-169-6620	36
PIPETTE, TRANSFER, DISPOSABLE, ETHYLUX PLASTIC SPITZER TUBE, WESTLAKE PLASTICS CO							
			EA	1.23	3	15-169-6835	36
PIPETTE, ULTRA-MICRO, LAMBDA, BOROSILICATE GLASS, WITH GROUND TIPS, ETCHED HAIRLINE CALIBRATION MARKING, SCIENTIFIC SUPPLIES CO							
CAP. LAMBDA							
1			EA	2.15	3	15-169-7505	36
2			EA	.63	3	15-169-7510	36
3			EA	.87	3	15-169-7515	36
PIPETTE, VOLUMETRIC OR TRANSFER, CLASS A KIMAX, NO. 37010, KIMBLE							
CAP ML	TOL ML PLUS/MINUS						
1	0.006		EA	1.49	5	15-169-8205	36
5	0.01		EA	2.48	5	15-169-8212	36
10	0.02		EA	3.36	5	15-169-8217	36
15	0.03		EA	NA	5	15-169-8222	36
20	0.03		EA	4.02	5	15-169-8227	36
25	0.03		EA	3.25	5	15-169-8232	36
50	0.05		EA	3.35	5	15-169-8252	36
100	0.08		EA	5.52	5	15-169-8272	36
PIPETTE, VOLUMETRIC OR TRANSFER, CLASS A PYREX OR KIMAX, NO. 7100 CORNING OR NO. 37004, KIMBLE							
CAP. ML	TOL ML PLUS/MINUS						
1	0.006		EA	1.29	123	15-169-8405	36
2	0.006		EA	1.44	1235	15-169-8410	36
3	0.01		EA	1.44	1235	15-169-8415	36
4	0.01		EA	1.52	25	15-169-8420	36
5	0.01		EA	1.24	123	15-169-8425	36
10	0.02		EA	1.46	123	15-169-8430	36
15	0.03		EA	1.65	1	15-169-8435	36
20	0.03		EA	1.63	123	15-169-8440	36
25	0.03		EA	1.75	123	15-169-8445	36
50	0.05		EA	2.31	123	15-169-8465	36
100	0.08		EA	3.54	123	15-169-8485	36
200	0.10		EA	5.42	3	15-169-8500	36
PIPETTE, VOLUMETRIC OR TRANSFER, BLUE LINE EXAX, RETESTED, WITH LONG DELIVERY STEM, 4 ML CAP., NO. 7102, CORNING OR KIMBLE 37000							
			EA	1.08	3	15-169-8605	36
PIPETTE FILLER (PIPETTOR), CAULIFIELD, CONSISTS OF RUBBER BULB WITH ENCLOSED VALVE AND VALVE CONTROL ON TOP, WILL DRAW UP AND DISCHARGE TO LESS THAN 1/100 ML, WILL 22103 OR MATHESON 55900-10							
			EA	4.00	3	15-169-9405	36
PIPETTE FILLER, PROPIPETTE, AUTOMATIC, CONSISTS OF RUBBER BULB WITH THREE AGATE BALL VALVES, FOR CONTROL OF SOLUTION IN PIPETTE, MATHESON 55900-10, FSC0 13-681-50							
			EA	4.57	23	15-169-9455	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
PIPETTOR, 500 ML FLASK, PREISER					
SCIENTIFIC CORP					
DELIVERY VOLUME ML					
5 PREISER 13-7350-23	EA	12.26	3	15-169-9705	36
10 CMS 251-777	EA	8.72	3	15-169-9710	36
15 WILL 22093	EA	12.82	3	15-169-9715	36
PLATE, DESICCATOR, PORCELAIN, GLAZED ONE SIDE, WITH					
THREE SMALL FEET AND 30 MM DIA HOLES, 6 MM THK					
SIZE NO. DIA MM NO. HOLES COORS NO.					
3 142 5 57004	EA	4.55	2	15-172-1010	36
4 190 7 57006	EA	6.93	23	15-172-1015	36
5 230 8 57007	EA	9.32	3	15-172-1020	36
PLATE, DESICCATOR, PORCELAIN, GLAZED ONE SIDE, WITH					
FEET, HOLE DIA 30 MM, SIZE NO. 3A, DIA 148 MM,					
6 MM THK, 7 HOLES, COORS 57005					
	EA	4.90	3	15-172-1100	36
PLATE, DESICCATOR, PORCELAIN, GLAZED ONE SIDE,					
WITHOUT FEET, 5 MM PERFORATIONS, LARGE HOLE IN					
CENTER					
SIZE THK PLATE COORS					
NO. IN. DIA MM NO.					
5 6 230 60003	EA	9.95	2	15-172-1210	36
3 5 140 60001	EA	5.11	3	15-172-1290	36
PLATE, PYREX OR KIMAX GLASS, CUT EDGES, POLISHED					
FACES, NO. 7740 CORNING OR NO. KG-33 KIMBLE, OR					
APPROVED EQUAL					
SIZE IN.					
3/8 X 15 X 30	EA	55.83	3	15-172-1710	36
1/2 X 15 X 30	EA	45.00	3	15-172-1714	36
3/4 X 15 X 30	EA	73.90	3	15-172-1718	36
1 X 12 X 20	EA	53.90	3	15-172-1728	36
PLATE, PYREX GLASS, FLAT, EDGES CUT					
SIZE IN.					
1/8 X 15 X 30	EA	25.79	23	15-172-1750	36
3/16 X 15 X 30	EA	30.98	3	15-172-1754	36
1/4 X 15 X 30	EA	28.78	23	15-172-1762	36
PLATE, PYREX GLASS, FLAT, GROUND EDGES					
SIZE IN.					
1/16 X 6 1/2 X 6 1/2	EA	4.02	3	15-172-1770	36
1/8 X 6 1/2 X 6 1/2	EA	2.90	3	15-172-1780	36
3/16 X 6 1/2 X 6 1/2	EA	3.55	3	15-172-1790	36
1/4 X 6 1/2 X 6 1/2	EA	3.26	3	15-172-1800	36
PLATE, PYREX OR FUREX, FLAT, WATER CLEAR FOR					
VISIBILITY, CUT EDGES, SIZE 1/2 X 24 X 24 IN.					
	EA	61.86	2	15-172-1850	36
PLATE, QUARTZ, POLISHED					
SIZE IN.					
1/16 X 6 X 6	EA	30.78	23	15-172-1900	97
1/8 X 6 X 6	EA	35.18	23	15-172-1910	97
1/4 X 6 X 6	EA	44.63	3	15-172-1920	97
3/8 X 6 X 6					
CLEAR, FUSED, POLISHED FACES AND					
GROUND EDGES, GE TYPE 101 OR					
APPROVED EQUAL					
	PC	NA	3	15-172-1940	97
PLATE, SPOT, COLOR REACTION, PORCELAIN, CIA OF					
DEPRESSIONS 21 MM, DEPTH OF DEPRESSIONS 7.5 MM,					
13 MM THK, COORS					
SIZE LGTH WIDTH NO. MFR					
GLAZED NO. MM MM DEPRESSIONS NO.					
BLACK 1 118 91 12 55105	EA	4.90	23	15-172-1960	36
WHITE 000 109 89 12 55007	EA	2.25	23	15-172-1980	36
PLUG, CLOSURE, DISPOSABLE, POLYURETHANE FOAM, AUTO-					
CLAVABLE, FOR LAB GLASSWARE, SCIENTIFIC PRODUCTS					
TO FIT OPENINGS MM NO. PER PKG MFR NO.					
6 TO 15 1000 T-1380	PKG	7.15	2	15-172-2400	36
16 TO 22 1000 T-1383	PKG	11.20	2	15-172-2410	36
28 TO 35 200 T-1385	PKG	3.72	2	15-172-2420	36
POLICEMAN, RUBBER, WITH ENDS SEALED FLAT AND CUT AT					
ANGLE, NO. 14-105, FISHER, NO. 13-9310, PREISER					
FOR ROD IN.					
1/8 SARGENT S-732258, MATHESON 57500-05	EA	.00	12	15-172-3200	36
3/16 SARGENT S-73225A, MATHESON 57500-10	EA	.00	1235	15-172-3210	36
POLICEMAN, RUBBER, SOFT AND THIN, WIDE FORM, 1 1/4					
IN. LGTH X 1 IN. WIDTH, ATTACHED TO 3/16 X 6 IN.					
GLASS ROD, MATH. 57510-10 OR VWR 53803-003 AND 3 PR					
59060-047					
	EA	.10	23	15-172-3350	36
POLISH, ABRASIVE, GAMAL ALUMINA, 4 OZ BTL,					
FSCO A-446 OR VWR 40400-048					
	BTL	6.30	1 5	15-172-3650	36

Attachment B

				UNIT	PRICE	STK PT	CATALOG NO	BUYER
RING, CORK, NO. 7-835, FISHER								
ID MM		OD MM	-CONTINUED-					
150	LAPINE 09586-05	210		EA	.00	3	15-183-1237	36
RING, EXTENSION, IRON, FISHER 14-055								
ID IN.	OD IN.	STEM LGTH IN.						
2 1/8	2 3/4	8	PREISER 13-8655	EA	.00	3	15-183-2207	36
			SARGENT S-730558					
3 1/4	3 7/8	7 1/2	MATHESON 57360-10	EA	.00	23	15-183-2212	36
			SARGENT S-73055C					
4 1/4	5 1/8	7	SARGENT S-73055D	EA	.00	3	15-183-2217	36
5 5/8	6 1/4	6 3/8	WILL 23226	EA	.60	23	15-183-2222	36
			SARGENT S-73055E					
5 13/16	6 11/16	6 3/4	SARGENT S-73055-X	EA	.00	3	15-183-2227	36
RING FORMS, BAKELITE, 3/4 IN. LONG, WITH 0.05 IN.								
WALL, BUEHLER CO OR APPROVED EQUAL								
SIZE IN.		MFR NO.						
1		20-8151-500	EA	.08	2		15-183-2417	23
1 1/4		20-8152-500	EA	.09	2		15-183-2422	23
1 1/2		20-8153-500	EA	.16	2		15-183-2427	23
RING, RASCHIG, DISTILLING COLUMN PACKING, GLASS,								
SIZE 6 MM X 6 MM, 1 MM WALL, NO. 21020-03, MATHESON								
KIMBLE 39100				LB	5.16	3	15-183-4007	36
RING, RASCHIG, BOROSILICATE GLASS, 5/8 IN. OD,								
MS 15-AA-8				CUFT	172.32	1	15-183-4087	36
RING, RASCHIG, BOROSILICATE GLASS, FIRE POLISHED,								
ANNEALED, TEMPERED, LENGTH 1 3/4 IN. PLUS 0.035								
MINUS 0.125 IN., OD 1 1/2 IN. PLUS 0.0 MINUS 0.0625								
IN., WALL THK 0.219 IN. PLUS 0.060 MINUS 0.0 IN.,								
324 RINGS PER CONTAINER, PER UCCND SPEC Y-MS-169				CONT	47.96	2	15-183-4097	36
RING, RASCHIG, KNIGHT-WARE, SIZE 1 IN. OD X 1 IN.								
LONG, MAURICE A KNIGHT				CUFT	5.72	2	15-183-4167	36
RING, SUPPORT, IRON, WITH CLAMP, NO. 18005, CENCO								
ID IN.		OD IN.						
1 3/8	MATHESON 57350-05	2	EA	.00	3		15-183-6007	36
2 1/2	SARGENT S-73045B	3	EA	.00	3		15-183-6012	36
3 3/8	SARGENT S-73045C	4	EA	.00	23		15-183-6017	36
4 5/8	SARGENT S-73045D	5	EA	.00	23		15-183-6022	36
RING, TRUNNION, SIZE 50 ML, NO. 325, INTERNATIONAL								
EQUIPMENT CO OR LAPINE E00325				EA	4.00	3	15-183-8007	36
RING, TRUNNION, SIZE 100 ML, NO. 350, INTERNATIONAL								
EQUIPMENT CO				EA	5.24	3	15-183-8017	36
RING, TRUNNION, FOR CENTRIFUGE TYPE C AND S-B, SIZE								
10 ML AND 15 ML, FOR METAL TUBES, IEC 310, SCIENT.								
PRODUCTS C2700 OR LAPINE E00310				EA	5.49	3	15-183-8507	36
ROD, CARBON, NOT GRAPHITE, HIGH PURITY, SPECTRO-								
GRAPHIC GRADE								
DIA IN.	LGTH IN.	NO. PER BOX						
1/8	12	100	EA	.90	3		15-188-0100	91
3/16	12	25	EA	.97	3		15-188-0120	91
1/4	12	15	EA	1.01	3		15-188-0140	91
ROD, FLEXAFRAME, ALUMINUM, NO. 14-666-10, FISHER								
SIZE		LGTH IN.						
A	MATHESON 61030-05	1 5/8	EA	.00	23		15-189-1000	36
B	MATHESON 61030-20	18	EA	.98	23		15-189-1010	36
D	VWR 60090-125	36	EA	1.00	23		15-189-1020	36
F	VWR 60090-169	72	EA	2.46	1		15-189-1030	36
ROD, GLASS, 4 FT LGTH, 30 LB PER PKG, 0.4 MM TOTAL OD								
VARIATION								
OD MM	APPROX LB/FT	CORNING NO.	KIMBLE NO.					
3	0.010	239430	80700	PC	.11	2	15-189-2400	36
4	0.019	239440	80700	PC	.14	2	15-189-2405	36
5	0.029	239450	80700	PC	.17	2	15-189-2410	36
6	0.043	239460	80700	PC	.35	12	15-189-2415	36
7	0.058	239470	80700	PC	1.45	12	15-189-2420	36
8	0.075	239480	80700	PC	.53	2	15-189-2425	36
10	0.118	239400	80700	PC	.80	2	15-189-2435	36
5	0.029	239450	80700	FT	.05	3	15-189-2510	36
6	0.043	239460	80700	FT	.06	3	15-189-2515	36
7	0.058	239470	80700	FT	.10	3	15-189-2520	36
8	0.075	239480	80700	FT	.10	3	15-189-2525	36
10	0.118	239400	80700	FT	.20	3	15-189-2535	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
ROD, KOVAR, CENTERLESS GROUND FINISH, IN 1 OR 2 FT STRAIGHT LGTHS, PLUS OR MINUS 0.001 IN., STUPAKOFF DIA IN. 0.060 MFR NO. 932060	FT	.14	1	15-189-6600	36
ROD, QUARTZ, FUSED, TRANSPARENT, 36 IN. LGTH					
OD MM					
3	IN	.03	2	15-189-7600	97
4	IN	.04	23	15-189-7610	97
5	IN	.06	2	15-189-7620	97
7	IN	.13	3	15-189-7625	97
10	IN	.23	23	15-189-7630	97
ROD, STIRRER, GLASS, GROUND FULL LGTH, STD BUTTON TYPE, NO. 8256, STYLE A, ACE GLASS CO			3	15-202-9880	
ROD, STIRRER, MONEL METAL, DOUBLE V SHAPE, 1/4 IN. DIA X 6 IN. LGTH, NO. 60012-20, MATHESON OR LAPINE 38366	EA	.00	3	15-189-8600	36
SADDLES, BERYL, KNIGHT-WARE, 1 1/2 IN., MAURICE A KNIGHT	CUFT	6.20	2	15-195-0450	36
SADDLES, PORCELAIN, SIZE 1 IN. NOMINAL, NORTON CO INTALOX	CUFT	10.59	2	15-195-0500	36
SARAN WRAP, 12 IN. WIDTH, 50 FT ROLL, DOW CHEMICAL CO FSN 8135-00-290-0338 GSA	ROLL	.35	23	15-195-1000	14
SCALE, METRIC AND ENGLISH, CELLULOID, HEAVY GAUGE, 6 IN. LGTH, GRADUATED IN 1/16 IN. ON ONE EDGE AND TO 150 MM IN 1 MM SUBDIVISIONS ON OPPOSITE EDGE, REVERSE SIDE HAS TEMP CONVERSION SCALE FROM MINUS 25 TO PLUS 100 DEG C AND MINUS 10 TO PLUS 212 DEG F TOGETHER WITH SCALES FOR DETERMINING SIZES OF CORKS AND RUBBER STOPPERS, NO. 11401, WILL CURP MATHESON 32930-10 OR FSCO 9-016	EA	.01	12	15-196-2108	36
SCALE, METRIC AND ENGLISH, MAPLE, VARNISHED, 36 IN. LGTH ONE SIDE GRADUATED IN METRIC SYSTEM SUBDIVIDED TO MM BOTH EDGES, REVERSE SIDE GRADUATED IN INCHES SUBDIVIDED IN 1/8 IN. BOTH EDGES, NO. 32940-10, MATHESON OR VWR 96525-009	EA	.54	123	15-196-2128	36
SCALE, METRIC AND ENGLISH, PLASTIC, TRANSPARENT, 12 IN. LGTH, GRADUATED MM AND 1/16 IN., C-THRU RULER CO, PREISER 13-3530/01	EA	.00	2	15-196-2148	36
SCISSORS, DISSECTING, CURVED, FINE POINTS, 25 MM LGTH BLADES, OVERALL LGTH 115 MM, NO. 19740-10, MATHESON OR VWR 25872-008	EA	.64	123	15-196-2408	36
SCISSORS, DISSECTING, MAYO TYPE, STRAIGHT, NO. B-1064, A S ALOE, SCIENT. PROD. D2650 OR APPROVED EQUAL	EA	5.59	2	15-196-2455	36
SCISSORS, DISSECTING, SURGICAL QUALITY, ONE SHARP AND ONE BLUNT POINT, 50 MM LGTH BLADES, OVERALL LGTH 140 MM, MATHESON 19770-20 OR LAPINE 11076-02	EA	1.62	123	15-196-2508	36
SCISSORS, NOBLE, MAYO TYPE, CURVED, STAINLESS STEEL, 6 1/2 IN., A S ALOE, FSCO 13-804-12, OR APPROVED EQUAL	EA	6.67	2	15-196-2628	36
SCISSORS, SERRATED, STAINLESS STEEL, 5-B 140 MM, 5 1/2 IN., NO. 38484, A S ALOE, NO. MX5-72, MILTEX, OR APPROVED EQUAL	EA	6.94	2	15-196-2648	36
SCISSORS, SERRATED, STAINLESS STEEL, 8-B 170 MM, 6 3/4 IN., NO. 38494, A S ALOE, NO. MX5-132, MILTEX, NO. MX 5-132 PREISER, OR APPROVED EQUAL	EA	9.47	2	15-196-2668	36
SCISSORS, STRABISMUS, STRAIGHT, STAINLESS STEEL, 115 MM, A S ALOE C-2735, PREISER MX 18-1450, OR APPROVED EQUAL	EA	9.15	2	15-196-2688	36
SCISSORS, STRAIGHT, STAINLESS STEEL, BLUNT AND BLUNT, 4 1/2 IN., A S ALOE B-1073A, AMER. MED. 15AM-200, FSCO 13-806 OR APPROVED EQUAL	EA	4.20	2	15-196-2708	36
SCISSORS, STRAIGHT, STAINLESS STEEL, SHARP AND BLUNT, 4 1/2 IN., A S ALOE B-1073C, AMER. MED. 15AM-100, FSCO 13-806-2 OR APPROVED EQUAL	EA	4.20	2	15-196-2728	36
SCOOP, WEIGHING, COUNTERPOISED, ALUMINUM WITH HANDLE, SIZE 30 ML, FSCO 2-190 OR SARGENT S-3875B	EA	.00	3	15-196-4508	36
SCOOPULA, STAINLESS STEEL, WITH ONE POINTED END AND ONE BLUNT END, CURVED SHAPE, 6 1/2 IN. LGTH, NO. 14-357, FISHER, NO. M59150-10, MATHESON SARGENT S-75290	EA	.00	1235	15-196-4608	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
SCOOPULA HANDLE, WOOD, NO. L4-358, FOR ATTACHMENT TO NO. 14-357 SCOOPULA, FISHER, NO. 59152-10, MATHESON	EA	.00	3	15-196-4708	36
SEAL, BREAK, GLASS, 10 MM DIA, NO. 7734, CORNING PYREX	EA	.91	23	15-199-2102	36
SEAL, GRADED, PYREX GLASS NO. 7740 TO SOFTER COMPOSITION GLASS, 300 MM LGTH, NO. 6460, CORNING					
OD MM					
7 (VWR 32843-280)	EA	2.31	3	15-199-2602	36
10 (VWR 32843-316)	EA	8.00	3	15-199-2612	36
13 (VWR 32843-327)	EA	10.45	3	15-199-2622	36
SEAL, GRADED, PYREX GLASS TO QUARTZ, 2 IN. OD, NO. QGS50, GE	EA	30.00	3	15-199-2662	97
SEAL, GRADED, KOVAR TO PYREX GLASS, STUPAKOFF					
KOVAR PYREX OVERALL MFR					
OD OD LGTH IN. LGTH IN. NO.					
6 MM 8 MM -- 4 --	EA	2.88	3	15-199-4202	36
-- 1/4 IN. 2 1/2 3 7/8 9048-6, COD 96-1008	EA	2.82	123	15-199-4302	36
1/2 IN. 1/2 IN. 2 1/2 3 7/8 9048-7, CODE 96-1009	EA	3.77	123	15-199-4402	36
3/8 IN. 10 MM 2 3 9048, CODE 96-1004	EA	3.40	123	15-199-4452	36
5/8 IN. 16 MM 1 3/4 3 9048-10, CODE 96-1017	EA	4.90	3	15-199-4502	36
3/4 IN. 18 MM -- -- --	EA	4.68	23	15-199-4567	36
1 IN. 25 MM -- -- --	EA	5.05	2	15-199-4602	36
1 1/4 IN. -- -- -- 9048-13	EA	15.05	3	15-199-4652	36
1 1/2 IN. 1 1/2 IN. -- -- 9048-17, CODE 96-1026	EA	8.75	2	15-199-4657	36
1 31/32 IN. 2 IN. 11 14 9803, CODE 96-1012	EA	12.45	23	15-199-4662	36
SEAL, GRADED, QUARTZ TO PYREX GLASS, AMERICAN FUSED QUARTZ CO					
ID IN.					
1/8	EA	4.18	3	15-199-6202	97
1/4	EA	4.41	3	15-199-6207	97
3/8	EA	5.43	3	15-199-6212	97
1/2	EA	6.35	3	15-199-6217	97
3/4	EA	10.35	3	15-199-6222	97
1	EA	13.30	3	15-199-6227	97
1 1/4	EA	17.16	3	15-199-6232	97
1 1/2	EA	16.80	3	15-199-6237	97
SEAL, GRADED, VYCOR TO PYREX GLASS, NO. 6466, CORNING					
OD MM LGTH MM					
9 50	EA	2.73	3	15-199-6305	36
15 57	EA	4.47	3	15-199-6310	36
38 70	EA	11.60	3	15-199-6320	36
51 76	EA	20.02	3	15-199-6325	36
SEAL, HOUSEKEEPER, OHFC, COPPER TO PYREX GLASS, COPPER 3 IN. LGTH, PYREX GLASS 6 IN. LGTH, VACTRONIC RESEARCH					
DIA IN.					
1/4	EA	5.05	3	15-199-6602	36
3/4	EA	6.49	3	15-199-6617	36
SEALANT, LEAK, HIGH VACUUM, CAPABLE OF ATTAINING ULTIMATE PRESSURES OF 2 X 10 MINUS 12 TORR, 16 OZ AEROSOL CAN, SPACE ENVIRONMENT LABORATORIES	CAN	53.49	2	15-199-7120	36
SHAFT, STIRRER, PYREX GLASS, STYLE A, FOR ACE GLASS STIRRER NO. 8245, ACE 8134-25, OR SGA NO. JS-2040, 250 - 5000 ML	EA	1.04	3	15-202-0500	36
SHAPER, GLASS BLOWERS, CARBON, SIZE 20 X 25 MM, NO. 27494-20, MATHESON OR FSCO 11-348-30	EA	.00	3	15-202-1110	36
SHAPER, GLASS BLOWERS, CARBON, HEXAGONAL TAPERED ROD, 150 MM LGTH, SMALL DIA 1 MM, LARGE DIA 15 MM, NO. 15491, WILL CORP. NO. 27494-10, MATHESON SARGENT S-40040-A	EA	1.80	3	15-202-1300	36
SHAPER, GLASS BLOWERS, FLARING, LONG FORM, BRASS BLADE, WITH WOOD HANDLE, BLADE WIDTH AT HANDLE 37 MM, BLADE LGTH 75 MM, NO. 27490-10, MATHESON NO. 12-9225, PREISER	EA	2.60	3	15-202-1500	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
STOPCOCK, HIGH PRESSURE, PYREX GLASS, STRAIGHT BORE, ACE 8176 OR LABGLASS LG-10180-S					
STOPPER BORE MM					
3	EA	4.89	3	15-205-1300	36
6	EA	11.52	3	15-205-1310	36
STOPCOCK, HIGH VACUUM, PYREX GLASS, MERCURY SEAL AND HOLLOW PLUG, FOR CONNECTING EITHER RIGHT OR LEFT OUTLET W/BOTTOM OUTLET, ACE 8141, LABGLASS LG-10081					
STOPPER					
BORE MM					
4	EA	9.92	3	15-205-2010	36
8	EA	13.61	3	15-205-2020	36
10	EA	16.91	3	15-205-2030	36
STOPCOCK, HIGH VACUUM, PYREX GLASS, MERCURY SEAL, RIGHT ANGLE, SGA J-4505 OR LABGLASS LG-10071					
STOPPER					
BORE MM					
2	EA	6.35	3	15-205-2400	36
4	EA	8.83	3	15-205-2405	36
5	EA	10.78	3	15-205-2410	36
6	EA	10.78	3	15-205-2415	36
8	EA	12.98	3	15-205-2420	36
15	EA	30.64	3	15-205-2430	36
STOPCOCK, HIGH VACUUM, PYREX GLASS, PRECISION GRADE WITH HOLLOW BLOWN STOPPER AND STRAIGHT BORE, NO. 5000, ECK AND KREBS					
STOPPER					
BORE MM					
1 (LABGLASS LG-9941-S)	EA	6.72	3	15-205-2600	36
2 (LABGLASS LG-9941-200)	EA	6.72	3	15-205-2602	36
3 (LABGLASS LG-9941-204)	EA	8.14	3	15-205-2604	36
4 (LABGLASS LG-9941-206)	EA	8.55	3	15-205-2606	36
6 (LABGLASS LG-9941-208)	EA	5.40	3	15-205-2608	36
8 (LABGLASS LG-9941-210)	EA	12.55	3	15-205-2610	36
10 (LABGLASS LG-9940-B)	EA	8.22	3	15-205-2612	36
STOPCOCK, HIGH VACUUM, PYREX GLASS, WITH HOLLOW PLUG FOR HORIZONTAL CONN, STOPPER BORE 4 MM, NO. 8201-06 ACE GLASS					
	EA	7.63	3	15-205-2700	36
STOPCOCK, HIGH VACUUM, PYREX GLASS, PRECISION GRADE, WITHOUT MERCURY SEAL, FOR HORIZONTAL FLOW, NO. 5044, ECK AND KREBS					
STOPPER					
BORE MM					
2 (LABGLASS LG-10060-100)	EA	8.18	3	15-205-2800	36
4 (LABGLASS LG-10060-102)	EA	4.80	3	15-205-2803	36
6 (LABGLASS LG-10060-104)	EA	10.02	3	15-205-2806	36
8 (LABGLASS LG-10060-106)	EA	6.56	3	15-205-2809	36
10 (LABGLASS LG-10060-108)	EA	7.95	3	15-205-2812	36
15 SGA NO. J5-6415	EA	24.70	3	15-205-2815	36
STOPCOCK, HIGH VACUUM, HORIZONTAL FLOW, HOLLOW PLUG, 4 MM BORE, TAPER 17/40, SIDE ARMS 10 MM OD, NO. LG-10060. LABGLAS OR EXACT EQUAL					
	EA	9.82	2	15-205-2850	36
STOPCOCK, MERCURY SEAL, PYREX GLASS, TWO-WAY, CAP- ILLARY, SOLID STOPPER PLUG, NO. 7500, CORNING					
STOPPER BORE MM					
2	EA	9.59	3	15-205-4500	36
4	EA	12.78	3	15-205-4505	36
STOPCOCK, MICRO, KIMAX GLASS, WITH TEFLON PLUG, 1 TO 5 RATIO TAPER, PLUG BORE 1 MM, NO. 41011F, KIMBLE					
	EA	7.33	23	15-205-4600	36
STOPCOCK, KIMAX GLASS, T-BORE, WITH TEFLON PLUG, 1 TO 5 RATIO TAPER, PLUG BORE 2 MM, NO. 41044F, KIMBLE					
	EA	8.39	3	15-205-4620	36
STOPCOCK, CAPILLARY, KIMAX GLASS, T-BORE, WITH TEFLON PLUG, 1 TO 5 RATIO TAPER, PLUG BORE 1 1/2 MM, NO. 41049F, KIMBLE					
	EA	11.94	23	15-205-4640	36
STOPCOCK, OBLIQUE BORE, PYREX GLASS, SOLID STOPPER PLUG, NO. 7340, CORNING					
STOPPER BORE MM					
1	EA	3.37	3	15-205-4820	36
2 CORNING 7340 OR KIMBLE 41014	EA	4.57	3	15-205-4822	36
6	EA	6.54	3	15-205-4828	36
10	EA	3.92	3	15-205-4832	36
15	EA	56.50	3	15-205-4835	36
STOPCOCK, PRECISION GRADE, PYREX GLASS, WITHOUT MER- CURY SEAL, WITH HOLLOW PLUG FOR RT ANGLE FLOW, NO. 5054, ECK AND KREBS					
STOPPER BORE MM					
4 OR LABGLASS LG-10060-102	EA	4.80	3	15-205-5300	36
10	EA	9.00	3	15-205-5310	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
STOPCOCK, PRECISION GRADE, PYREX GLASS, WITHOUT MERCURY SEAL, WITH HOLLOW PLUG WITH OBLIQUE BORE, NO. 5100, ECK AND KREBS					
BORE MM					
2 OR LABGLASS LG-10090-100	EA	7.69	3	15-205-5395	36
2 OR LABGLASS LG-10090	EA	7.69	2	15-205-5400	36
4 OR LABGLASS LG-10090	EA	9.31	23	15-205-5405	36
STOPCOCK, PRECISION GRADE, PYREX GLASS, WITHOUT MERCURY SEAL, 3-WAY OBLIQUE BORE, WITH HOLLOW PLUG, ECK + KREBS 5124 OR LABGLASS LG-10110					
STOPPER BORE MM					
2	EA	15.78	3	15-205-5450	36
STOPCOCK, PRECISION GRADE, PYREX GLASS, WITH 120 DEG ANGLE BORE SEALED INTO STOPPER, NO. 5032, ECK + KREBS OR LABGLASS LG-10040-B					
BORE MM					
2	EA	6.11	3	15-205-5600	36
3 (OR SGA JS-6085)	EA	6.20	3	15-205-5605	36
5	EA	6.78	3	15-205-5610	36
STOPCOCK, PRECISION GRADE, PYREX GLASS, WITH T BORE SEALED INTO STOPPER, NO. LG-10000-B LABGLASS					
BORE MM					
2	EA	6.20	3	15-205-5800	36
3	EA	8.34	3	15-205-5805	36
4	EA	8.82	3	15-205-5810	36
STOPCOCK, STRAIGHT BORE, GLASS, WITH TEFLON PLUG 1 TO 5 RATIO TAPER, CORNING 7282, KIMBLE 41004-F OR APPROVED EQUAL					
PLUG BORE MM					
1	EA	6.79	3	15-205-6050	36
1 1/2	EA	5.80	3	15-205-6055	36
2	EA	5.98	23	15-205-6060	36
4	EA	9.62	23	15-205-6065	36
6	EA	11.39	23	15-205-6070	36
STOPCOCK, STRAIGHT BORE, GLASS, TEFLON PLUG WITH METERING VALVE, 1 TO 5 RATIO TAPER, NO. 41002-F, KIMBLE					
PLUG BORE MM					
2	EA	14.42	3	15-205-6080	36
4	EA	15.91	23	15-205-6085	36
STOPCOCK, STRAIGHT BORE, CAPILLARY, BOROSILICATE GLASS, WITH TEFLON PLUG 1 TO 5 RATIO TAPER, CORNING 7302, KIMBLE 41009-F OR APPROVED EQUAL					
BORE MM					
1	EA	6.34	3	15-205-6220	36
1 1/2	EA	6.43	23	15-205-6225	36
2	EA	7.12	23	15-205-6230	36
STOPCOCK, STRAIGHT BORE, CAPILLARY, KIMAX GLASS, TEFLON PLUG WITH METERING VALVE, 1 TO 5 RATIO TAPER, PLUG BORE 1 1/2 MM, NO. 41007F, KIMBLE					
	EA	14.86	3	15-205-6233	36
STOPCOCK, STRAIGHT BORE, CAPILLARY, BOROSILICATE GLASS, WITH SOLID S/T STOPPER PLUG, CORNING 7300 OR KIMBLE 41009					
BORE MM					
1	EA	3.94	3	15-205-6250	36
1 1/2	EA	4.18	3	15-205-6255	36
2	EA	4.37	23	15-205-6260	36
STOPCOCK, STRAIGHT BORE, PYREX GLASS, MICRO, SOLID STOPPER PLUG, INTERCHANGEABLE, APPROX BORE OF STOPPER 1 MM, CORNING 7320 OR KIMBLE 41012					
	EA	4.90	3	15-205-6300	36
STOPCOCK, STRAIGHT BORE, PYREX GLASS, WITH SOLID S/T STOPPER PLUG, CORNING 7280 OR KIMBLE 41004					
STOPPER					
BORE MM					
1	EA	3.48	3	15-205-6400	36
2	EA	4.18	235	15-205-6402	36
3	EA	4.90	23	15-205-6404	36
4	EA	5.45	3	15-205-6406	36
6	EA	6.30	3	15-205-6408	36
STOPCOCK, STRAIGHT BORE, PYREX GLASS, WITH SOLID S/T STOPPER PLUG, OD OF SIDE ARMS 12 MM, STOPPER BORE 6 MM, STOPPER NO. 6, NO. K-801000-0006, KONTES GLASS CO, NO SUB					
	EA	7.67	5	15-205-6512	36
STOPCOCK, THREE-WAY, KIMAX GLASS, WITH TEFLON PLUG 1 TO 5 RATIO TAPER, KIMBLE 41024F, CORNING 7382, OR APPROVED EQUAL					
BORE MM					
1	EA	9.80	3	15-205-7900	36
2	EA	11.82	3	15-205-7905	36
4	EA	14.78	3	15-205-7910	36

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
STOPCOCK, THREE-WAY, KIMAX GLASS, 120 DEG BORE, WITH TEFLON PLUG, 1 TO 5 RATIO TAPER, BORE PLUG 2 MM, NO. 41055F, KIMBLE	EA	11.31	3	15-205-7920	36
STOPCOCK, THREE-WAY, CAPILLARY, BOROSILICATE GLASS, WITH TEFLON PLUG 1 TO 5 RATIO TAPER, CORNING 7402, KIMBLE 41029-F OR APPROVED EQUAL					
BORE MM					
1	EA	11.22	3	15-205-7940	36
1 1/2	EA	10.93	3	15-205-7945	36
2	EA	11.47	3	15-205-7950	36
STOPCOCK, THREE-WAY, PYREX GLASS, 120 DEG BORE, SOLID STOPPER PLUG, CORNING 7450 OR KIMBLE 41055					
STOPPER BORE MM					
2					
4					
8					
10					
EA	4.09	3	15-205-8000	36	
EA	5.83	1	15-205-8005	36	
STOPCOCK, THREE-WAY, PYREX GLASS, CAPILLARY, SOLID STOPPER PLUG, 7 MM OD SIDE ARMS, CORNING 7400 OR KIMBLE 41029					
STOPPER BORE MM					
1 1/2					
EA	6.35	3	15-205-8250	36	
STOPCOCK, THREE-WAY, PYREX GLASS, MERCURY SEAL, SOLID STOPPER PLUG, 2 ARMS ON ONE SIDE AND 1 ARM OPPOSITE, NO. 7540, CORNING					
STOPPER BORE					
MM					
2					
OD SIDE					
ARMS MM					
8					
EA	10.48	3	15-205-8300	36	
STOPCOCK, THREE-WAY, PYREX GLASS, SOLID STOPPER PLUG, WITH 2 ARMS ON 1 SIDE AND 1 ARM OPPOSITE, NO. 7380, CORNING OR KIMBLE 41024					
STOPPER					
BORE MM					
1					
2					
3					
4					
OD SIDE					
ARMS MM					
7					
8					
9					
10					
EA	5.59	3	15-205-8400	36	
EA	6.05	3	15-205-8403	36	
EA	8.21	3	15-205-8406	36	
EA	7.13	2	15-205-8409	36	
STOPCOCK, THREE-WAY, PYREX GLASS, T SHAPE, CAP- ILLARY, 7 MM OD SIDE ARMS, SOLID STOPPER PLUG, NO. 7440, CORNING OR KIMBLE 41049					
STOPPER BORE MM					
2					
EA	5.49	3	15-205-8454	36	
STOPCOCK, THREE-WAY, PYREX GLASS, T SHAPE, SOLID STOPPER PLUG, CORNING 7420 OR KIMBLE 41044					
STOPPER					
BORE MM					
1					
2					
3					
4					
OD SIDE					
ARMS MM					
7					
8					
9					
10					
EA	3.80	3	15-205-8700	36	
EA	4.67	23	15-205-8702	36	
EA	5.47	3	15-205-8704	36	
EA	7.57	3	15-205-8706	36	
STOPPER, CORK, XXX QUALITY, FLAT, EXTRA SHORT, NO. S-23105, SARGENT, OR MANTON					
DIA MM					
47					
50					
56					
59					
63					
66					
69					
75					
82					
87					
92					
108					
128					
MANTON 55209	EA	.00	3	15-211-2400	36
MANTON 55209	EA	.00	3	15-211-2405	36
MANTON 55212	EA	.00	3	15-211-2410	36
MANTON 55213	EA	.00	3	15-211-2415	36
MANTON 55214	EA	.00	3	15-211-2420	36
MANTON 55215	EA	.00	3	15-211-2425	36
MANTON 55216	EA	.00	3	15-211-2430	36
MANTON 55217	EA	.00	3	15-211-2435	36
MANTON 55219	EA	.00	3	15-211-2440	36
--	EA	.00	3	15-211-2445	36
MANTON 55220	EA	.00	3	15-211-2450	36
MANTON 55223	EA	.00	3	15-211-2460	36
MANTON 55276	EA	.00	3	15-211-2475	36
STOPPER, CORK, XXXX QUALITY, LABORATORY, REGULAR					
LGTH					
SIZE					
NO.					
0000	--	--	--	SARGENT XS-23025-X	
				SCIENTIFIC PRODUCTS C8220-4T	
EA	.00	23	15-211-2802	36	
000	13	6	4	VWR 23420-027	EA .00 123 15-211-2804 36
00	13	8	5	VWR 23420-049	EA .00 123 15-211-2806 36
0	13	11	7	MATHESON 16810-05	
				SCI. PROD. C8205-1T	
EA	.01	123	15-211-2808	36	
1	16	11	8	FSCO 7-7928	EA .00 123 15-211-2810 36
2	17	13	10	FSCO 7-792C	EA .00 23 15-211-2812 36
3	19	14	11	FSCO 7-792D	EA .00 235 15-211-2814 36
4	20	16	12	FSCO 7-792E	EA .00 123 15-211-2816 36
5	22	17	13	FSCO 7-791F	EA .00 1235 15-211-2818 36
6	24	19	15	FSCO 7-792G	EA .00 1 3 15-211-2820 36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
TUBE, ALUNDUM, TYPE RA98, SPIRALLY GROUND, NORTON BORE IN. PITCH IN. LGTH IN. MFR NO.					
2 1/8 10 6916	EA	18.80	3	15-242-0733	36
3 1/2 5/16 5 6366	EA	.00	3	15-242-0743	36
TUBE, CENTRIFUGE, CELLULOSE NITRATE, SIZE 1/2 IN. X 2 IN., NO. 305050, BECKMAN	EA	.20	2	15-242-0900	36
TUBE, CENTRIFUGE, CONICAL BOTTOM, GRADUATED, SCREW CAP. 15 ML SIZE, GRADUATED IN 0.1 ML DIVISIONS, RUBBER LINER CEMENTED IN CAPS, KIMAX NO. 45166, KIMBLE	EA	2.22	3	15-242-1093	36
TUBE, CENTRIFUGE, GLASS, TAPER BOTTOM, GRADUATED, HEAVY DUTY, 40 ML CAP., NO. CT-2055-H, CLAY-ADAMS CO	EA	.00	3	15-242-1163	36
TUBE, CENTRIFUGE, POLYPROPYLENE, MOLDED, RIMLESS ROUND BOTTOM, 50 ML CAP., 29 MM OD, 104 MM LGTH, KIMBLE 58350	EA	.15	3	15-242-1225	36
TUBE, CENTRIFUGE, POLYETHYLENE SIZE ML BOTTOM					
15 CONICAL SARGENT S-17941	EA	.28	2	15-242-1703	36
50 ROUND SARGENT N3112	EA	.25	2	15-242-1753	36
TUBE, CENTRIFUGE, POLYPROPYLENE, 100 ML CAP., NO. 5-562-10, FSCO, MATHESON 10200-32 OR VWR 60817-325	EA	.52	3	15-242-1950	36
TUBE, CENTRIFUGE, PYREX GLASS, CONICAL, BEADED RIM, GRADUATED, CORNING 8080 OR KIMBLE 45165 CAP. ML					
15	EA	1.51	123	15-242-2153	36
50	EA	1.90	23	15-242-2163	36
TUBE, CENTRIFUGE, PYREX GLASS, CONICAL, BEADED RIM, HEAVY DUTY, GRADUATED, CORNING 8140 OR KIMBLE 45199 CAP. ML					
12	EA	1.58	2	15-242-2183	36
40	EA	2.35	2	15-242-2193	36
TUBE, CENTRIFUGE, PYREX GLASS, CONICAL, BEADED RIM, HEAVY DUTY, CORNING 8120 OR KIMBLE 45194 CAP. ML					
12	EA	.41	3	15-242-2203	36
40	EA	.74	3	15-242-2213	36
TUBE, CENTRIFUGE, PYREX GLASS, CONICAL, BEADED RIM, PLAIN, NO. 8060, CORNING CAP. ML					
2 OR KIMBLE 45150	EA	.33	2	15-242-2263	36
3 OR KIMBLE 45150	EA	.38	23	15-242-2273	36
5 OR KIMBLE 45150	EA	.31	3	15-242-2283	36
15 OR KIMBLE 45160	EA	.37	23	15-242-2293	36
TUBE, CENTRIFUGE, PYREX GLASS, GRADUATED IN 1/10 ML DIVISIONS, WITHOUT HOOKS, 14/15 S/T GROUND JOINTS, FLAT-HEADED STOPPER, 14/15 S/T WITHOUT HOOKS, 10 ML CAP., 16.5 TO 17.0 MM OD, 0.650 TO 0.669 OD, NO. JT-7710, SGA, LABGLASS SPECIAL OR APPROVED EQUAL	EA	3.44	2	15-242-2343	36
TUBE, CENTRIFUGE, PYREX GLASS, HEAVY DUTY, SHORT CON- ICAL BOTTOM, UNGRADUATED, 40 ML, NO. 8320, CORNING	EA	.82	3	15-242-2353	36
TUBE, CENTRIFUGE, PYREX GLASS, OIL, PEAR SHAPE, STEM GRADUATED 0 TO 1.5 ML IN 0.1 DIV, BODY GRADU- ATED FROM 1.5 ML TO 5 ML IN 0.5 ML DIV, FROM 5 ML TO 10 ML IN 1 ML DIV, AND AT 15, 20, 25, 50 AND 100 ML, SPEC ASTM D96, 100 ML CAP., NO. 8200, CORNING OR KIMBLE 45244	EA	4.44	3	15-242-2373	36
TUBE, CENTRIFUGE, PYREX GLASS, GOETZ, PEAR SHAPE, GRADUATED, LOWER STEM GRADUATED UPWARD TO 1 ML IN 0.05 DIV, BODY GRADUATED FROM 1 ML TO 5 ML IN 1 ML DIV, FROM 5 ML TO 50 ML IN 5 ML DIV, FROM 50 ML TO 100 ML IN 10 ML DIV, 100 ML CAP., NO. 8220, CORNING OR KIMBLE 45250	EA	4.77	23	15-242-2393	36
TUBE, CENTRIFUGE, PYREX GLASS, ROUND BOTTOM, HEAVY DUTY WITH LIP, 50 ML CAP., PER ORNL SKETCH NO. A-2, H S MARKIN	EA	.60	3	15-242-2403	36
TUBE, CENTRIFUGE, PYREX GLASS, ROUND BOTTOM, POUROUT, PLAIN, CORNING 8240 OR KIMBLE 45190 CAP. ML					
50	EA	.52	1 3	15-242-2423	36
100	EA	.74	3	15-242-2428	36
TUBE, CENTRIFUGE, POLYPROPYLENE, 11 MM DIA X 77 MM LGTH, MATHESON 10206-06	EA	.43	3	15-242-2453	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
TUBE, CENTRIFUGE, POLYPROPYLENE, PLAIN					
CAP. OD LGTH IEC					
ML MM MM NO.					
20 16 114 2837	EA	.35	23	15-242-2473	36
MATHESON 10206-26					
50 29 105 2828	EA	.13	123	15-242-2478	36
MATHESON 10206-38					
OR VWR 21011-377					
TUBE, CENTRIFUGE, POLYPROPYLENE, ROUND BOTTOM, PLAIN,					
10 ML CAP., 127 MM X 108 MM, PREISER 16-8363,					
MATHESON 10206-12 OR VWR 21011-275	EA	.00	2	15-242-2493	36
TUBE, COMBUSTION, MCDANEL, HIGH TEMP, VITREOUS,					
SINGLE REDUCED END, BURRELL CORP A24-510					
ID OD OVERALL					
IN. IN. LGTH IN.					
1 1/8 1 3/8 30	EA	12.06	12 5	15-242-2608	36
MATHESON 15360-40					
OR FSCO 7-586F					
1 1/4 1 1/2 33	EA	.00	3	15-242-2613	36
MATHESON 15360-60					
1 3/4 2 36	EA	19.37	3	15-242-2618	36
WILL CTT13436					
TUBE, COMBUSTION, PYREX, CLOSED END, 15 MM ID, 20					
MM OD, 600 MM LGTH, NO. 8620, CORNING	EA	1.86	3	15-242-2624	36
TUBE, COMBUSTION, VYCOR BRAND GLASS, SIZE C, 1000					
MM LGTH X 19 MM ID X 25 MM OD, NO. 18600, CORNING	EA	13.98	3	15-242-2628	36
TUBE, CONNECTION, GLASS, NO. G10428A, EMIL GREINER					
NO. 78-426-01, 180 MM, MANOSTAT					
OR VWR 17449-002	EA	.00	3	15-242-2630	36
TUBE, CONNECTING, BOROSILICATE GLASS, 75 DEG, TWO					
WAY, WITH INNER S/T JOINTS OF THE SAME SIZE, S/T					
19/38, CORNING 8920 OR KIMBLE 44920	EA	3.81	3	15-242-2983	36
TUBE, CONNECTING, BOROSILICATE GLASS, 75 DEG, TWO-					
WAY, WITH INNER S/T JOINTS OF THE SAME SIZE, S/T					
24/40, CORNING 8920 OR KIMBLE 44920	EA	5.16	3	15-242-3003	36
TUBE, CONNECTING, BOROSILICATE GLASS, 105 DEG, TWO-					
WAY, S/T NO. 24/40, WITH INNER AND OUTER JOINT, NO.					
8940, CORNING OR KIMBLE 44925	EA	3.84	23	15-242-3003	36
TUBE, CONNECTING, T-SHAPE, GLASS, WITH CONSTRICTED					
ENDS, FOR RUBBER TUBING, CORNING 9187 -KIMBLE 45020					
TO FIT TUBING APPROX OD LGTH LGTH					
HAVING INSIDE OF TUBE CROSSPIECE UPRIGHT					
3/16 6 88 44	EA	NA	3	15-242-3218	36
1/4 8 88 44	EA	.35	23	15-242-3218	36
3/8 12 120 60	EA	.70	2	15-242-3218	36
1/2 15 140 70	EA	.75	3	15-242-3218	36
TUBE, CONNECTING, Y-SHAPE, GLASS, WITH CONSTRICTED					
ENDS, FOR RUBBER TUBING, CORNING 9189 -KIMBLE 45030					
TO FIT TUBING APPROX OD LGTH					
HAVING INSIDE OF TUBE EACH ARM					
DIA IN. MM MM					
1/4 8 44	EA	.47	12	15-242-3403	36
TUBE, CORNELL STYLE, METAL, 3/4 IN. DIA X 1/2 IN.					
LGTH, NO. 302, INTERNATIONAL EQUIPMENT CO OR NO.					
9087-10, MATHESON	EA	4.50	3	15-242-4003	36
TUBE, CORNELL STYLE, METAL, 1 3/8 IN. DIA X 6 IN.					
LGTH, NO. 340, INTERNATIONAL EQUIPMENT CO					
OR NO. 9106-10, MATHESON	EA	6.38	3	15-242-4008	36
TUBE, DRINKING, PYREX GLASS, 8.50 TO 8.75 MM DIA					
WITH 1 MM WALL, LONG END 2 1/4 IN. LGTH, WITH 2					
TO 3 MM FIRE POLISHED OPENING, SHORT END 1 1/4					
IN. LGTH FIRE POLISHED AND WITHOUT CONSTRICTION,					
PFR HCC DWG A10F-17671	EA	.10	2	15-252-0500	36
TUBE, DRYING, CALCIUM CHLORIDE, SCHWARTZ, GLASS WITH					
S/T STOPPER NO. 14/20 AND CONSTRICTED ENDS FOR					
RUBBER TUBING, NO. 46050, KIMBLE					
LGTH MM					
100	EA	10.17	3	15-252-1010	36
150	EA	10.17	3	15-252-1020	36
TUBE, DRYING, CALCIUM CHLORIDE, STRAIGHT FORM, GLASS,					
SINGLE BULB, WITH CONSTRICTED END FOR RUBBER TUB-					
ING, CORNING 7775 OR KIMBLE 46010					
LGTH MM TO					
BOTTOM OF BULB					
150	EA	.78	23	15-252-1110	36
TUBE, FILTER, BOROSILICATE GLASS, APPROX SIZE 36 MM					
ID, 160 MM LGTH, CORNING 9480 OR KIMBLE 46170	EA	1.11	3	15-252-1500	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
TUBE, FILTER, BOROSILICATE GLASS, WITH SEALED IN FIBERGLAS FILTER DISC, ACE GLASS					
DISC DIA MM					
10 (LABGLASS LG-7160-S) B	EA	4.10	23	15-252-1550	36
10 (LABGLASS LG-7160-S) D	EA	4.16	23	15-252-1555	36
20 B	EA	4.66	3	15-252-1560	36
20 D	EA	4.95	3	15-252-1565	36
30 B	EA	5.37	3	15-252-1570	36
30 (LABGLASS LG-7160) D	EA	7.10	3	15-252-1575	36
TUBE, GAS COLLECTING, BOROSILICATE GLASS, WITH TWO STRAIGHT BORE CAPILLARY STOPCOCKS, S/T NO. 3, APPROX SIZE 50 MM ID, 310 MM LGTH, CAP. 250 ML, NO. 9500, CORNING OR KIMBLE 30040					
	EA	16.46	3	15-252-2000	36
TUBE, GAS DISPERSION, BOROSILICATE GLASS, WITH 12 MM OD FRITTED CYLINDER, 8 MM STEM DIA, 250 MM LGTH, POROSITY C, CORNING 39533 OR KIMBLE 28630					
	EA	2.82	23	15-252-2050	36
TUBE, GAS DISPERSION, BOROSILICATE GLASS, WITH FRITTED DISC, OVERALL DIM ACROSS DISC AND STEM IS 35 MM FOR 20 MM DISC, 45 MM FOR 30 MM DISC, 6 MM STEM DIA, 250 MM LGTH, CORNING 39525 - KIMBLE 28600					
DISC DIA MM					
20 C	EA	5.07	2	15-252-2100	36
20 M	EA	5.07	3	15-252-2115	36
30 M	EA	6.58	3	15-252-2130	36
TUBE, MIXING, COMPARATOR, MARKET 5, 15 AND 17.5 ML, FOR USE WITH HIGH PHOSPHATE SLIDE COMPARATOR LAB TEST SET, CODE 1100, W A TAYLOR 515, REPL PT					
	EA	.00	1	15-252-3150	36
TUBE, REDUCTOR, JONES, LONG FORM, 27 IN. LGTH, 7/8 IN. OD, FOR USE IN DETERMINATION OF ION, MOLYBDENUM, VANADIUM AND SIMILAR POLYVALENT ELEMENTS, NO. 39000, KIMBLE					
	EA	7.47	3	15-252-5150	36
TUBE, SAMPLE, MELTING POINT, CAPILLARY, THIN WALL GLASS CAPILLARIES TO HOLD SAMPLES, 1.5 TO 2 MM OD, 68 MM LGTH, 100 PCS IN GLASS VIAL, NO. 34500, KIMBLE					
	VIAL	.76	2	15-252-6200	36
TUBE, SEALING, BOROSILICATE GLASS, REDUCED ENDS, WITH FRITTED DISC, 90 MM DISC DIA, 25 MM TUBE DIA, 200 MM LGTH, CORNING 39580 OR KIMBLE 28720					
POROSITY					
C	EA	16.44	3	15-252-7000	36
F	EA	13.08	3	15-252-7010	36
M	EA	15.83	3	15-252-7020	36
TUBE, TEST, CULTURE, WITH SCREW CAPS, 125 MM X 20 MM, CORNING 9829, KIMBLE 45066 OR APPROVED EQUAL					
	EA	.23	2	15-255-1008	36
TUBE, TEST, GRADUATED FROM 5/10 TO 10 ML IN 1/10 ML INCREMENTS, 16 MM OUTSIDE DIA, 125 MM LONG, BOROSILICATE GLASS, WITH LIP, NO. 46350, KIMBLE, OR APPROVED EQUAL					
	EA	1.35	2	15-255-1510	36
TUBE, TEST, BOROSILICATE GLASS, WITH RIM, NO. 9800, CORNING OR KIMBLE 45042					
OD MM					
13	EA	.06	23	15-255-2108	36
15	EA	.06	23	15-255-2118	36
16	EA	.07	3	15-255-2128	36
18	EA	.08	3	15-255-2138	36
20	EA	.09	1	15-255-2148	36
25	EA	.15	23	15-255-2158	36
25	EA	.15	123	15-255-2168	36
25	EA	.22	3	15-255-2178	36
TUBE, TEST, BOROSILICATE GLASS, WITH RIM AND SIDE ARM, 18 MM OD, 150 MM LGTH, NO. 9840, CORNING OR KIMBLE 46225					
	EA	.55	23	15-255-2508	36
TUBE, TEST, CULTURE, DISPOSABLE, TYPE I PHARMACEUTICAL GLASS, SIZE 10 MM OD, 75 MM LGTH, PALLET PACKED, 54,000 PFR PALLET, NO. 73000, KIMBLE					
	EA	.02	23	15-255-4600	36
TUBE, TEST, CULTURE, LIPLESS, 16 MM OD X 100 MM LGTH, NO. 45060, KIMBLE, OR APPROVED EQUAL					
	EA	.04	2	15-255-5008	36
TUBE, TEST, CULTURE, BOROSILICATE GLASS, WITHOUT RIM, CORNING 9820 OR KIMBLE 45048					
OD MM					
10	EA	.05	23	15-255-5108	36
12	EA	.06	12	15-255-5118	36
13	EA	.05	23	15-255-5128	36
15	EA	.05	3	15-255-5138	36
15	EA	.06	2	15-255-5148	36
16	EA	.07	2	15-255-5168	36
18	EA	.07	23	15-255-5178	36
20	EA	.11	23	15-255-5198	36
25	EA	.10	3	15-255-5208	36

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
TUBE, TEST, CULTURE, BOROSILICATE GLASS, WITHOUT RIM, CORNING 9820 OR KIMBLE 45048					
OD MM LGTH MM	-CONTINUED-				
25 150	EA	.15	3	15-255-5218	36
38 200	EA	.52	23	15-255-5238	36
TUBE, TEST, CULTURE, RESISTANCE GLASS, WITHOUT RIM, NO. K-45060, KIMBLE					
OD MM LGTH MM					
13 100	EA	.03	3	15-255-5503	36
16 150	EA	.04	3	15-255-5508	36
TUBE, VACUUM COLLECTION, THERMAL RESISTANT GLASS, MUST BE DRY AND FREE FROM STRAIN, PYREX, UCC DWG CM-26138					
	EA	.94	2	15-258-6309	36
TUBING, ASBESTOS, BRAIDED, COMMERCIAL GRADE, 5 LB SPL, USED ON CLAMPS FOR HOLDING BEAKERS, JOHNS-MANVILLE					
ID IN. FT PER LB					
1/2 SARGENT S-1200B 20	FT	.00	3	15-261-1095	36
5/8 SARGENT S-1200C 15	FT	.00	3	15-261-1100	36
3/4 SARGENT S-1200D 14	FT	.00	3	15-261-1105	36
7/8 SARGENT S-1200E 12	FT	.00	3	15-261-1110	36
TUBING, CELLULOSE, SEAMLESS, CENCO 70160					
INFLATED ROLL MFR					
DIA IN. LGTH'FT SIZE					
1 1/8 100 A VMR 25225-260	ROLL	3.48	23	15-261-3100	36
2 1/4 50 B VMR 25225-281	FT	.09	3	15-261-3120	36
TUBING, CERAMIC, FLAT, SIZE 0.4 MM ID, 2.0 MM OD, 12 IN. LGTH, SD 1.10, FOURTH SERIES, CARBORUNDUM CO					
	EA	.11	3	15-264-4000	36
TUBING, FLUOROTHENE, KEL-F, 0.0375 IN. OD X 0.062 IN. WALL THICKNESS, INSIDE AND OUTSIDE SURFACES SMOOTH AND FREE FROM DEFECTS, INSIDE DIA CONCENTRIC WITH OUTSIDE DIA, BORE 0.251 IN. PLUS 0.000 IN. MINUS 0.010 IN.					
	FT	2.54	5	15-270-3067	36
TUBING, FLUOROTHENE A, 1/4 IN. OD, CAT. NO. FNT-2002, FABRICATED BY UCC PLANT ORGDP					
	FT	2.07	5	15-270-3127	36
TUBING, FLUOROTHENE A, 1/2 IN. OD, CAT. NO. FNT-2004, FABRICATED BY UCC PLANT ORGDP					
	FT	.91	3	15-270-3147	92
TUBING, GLASS, BOROSILICATE, 48 IN. LGTH, WITH SQUARE ENDS, CORNING 0088 BRAND OR KIMBLE 46470					
OD WALL THK					
4 0.75	FT	.01	3	15-273-3116	36
5 1.05	FT	.02	3	15-273-3126	36
45 1.50	FT	.05	3	15-273-3256	36
TUBING, KOVAR, 0.075 IN. OD, 0.010 IN. WALL THK, IN ONE OR TWO FT STRAIGHT LGTHS, NO. 900-75010, STUPAKOFF					
	FT	.60	3	15-276-2108	36
TUBING, KOVAR, 1 IN. OD, 0.030 IN. WALL THK, RANDOM LGTH, STUPAKOFF					
	IN	.44	5	15-276-2208	36
TUBING, KOVAR, 0.125 IN. OD, 0.010 IN. WALL THK, NO. 90125010, STUPAKOFF					
	FT	1.13	3	15-276-2708	36
TUBING, NYLON, 1000 PSI TESTED BURSTING PRESSURE 1/2 IN. OD, 0.380 IN. ID					
	FT	.12	2	15-279-5010	92
TUBING, POLYETHYLENE, 0.005 IN. THICK, COLOR TO BE BRIGHT RED, OPAQUE, 917-918 DENSITY, MELT INDEX APPROX 2 OR LESS, 500 FT ROLL					
FLAT DIM. IN.					
(WIDTH)					
3 1/2	ROLL	9.45	3	15-282-1850	36
9 1/2	ROLL	25.65	3	15-282-1875	92
TUBING, POLYETHYLENE, 0.005 IN. THK, 917-918 DENSITY, MELT INDEX APPROX 2 OR LESS, 500 FT ROLL, PPC INDUSTRIES					
FLAT DIM. IN. CIRCUMFERENCE IN.					
3 6	FT	.01	3	15-282-1980	92
9 1/2 19	FT	.03	3	15-282-2000	92
13 1/4 26 1/2	FT	.02	3	15-282-2010	92
19 38	FT	.08	3	15-282-2020	92
TUBING, POLYETHYLENE, LAY FLAT, 0.006 MIL THK, 48 IN. CIRCUMFERENCE, 24 IN. FLAT, CRYSTAL-X-CORP					
	FT	.26	3	15-282-2030	92
TUBING, POLYETHYLENE, LAY FLAT, 0.006 MIL THK, 106 IN. CIRCUMFERENCE, 53 IN. FLAT, CRYSTAL-X-CORP					
	FT	.20	3	15-282-2035	92

Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
TUBING, POLYETHYLENE, 0.006 TO 0.008 IN. THK, 917-918 DENSITY, MELT INDEX APPROX 2 OR LESS, 500 FT ROLL, PPC INDUSTRIES					
FLAT DIM.					
IN.					
22	FT	.05	3	15-282-2070	92
42	FT	.17	3	15-282-2080	92
TUBING, PLASTIC, BUNDLE, 7 TUBE, 1/4 IN. POLYETHYLENE 1/16 IN. POLYVINYL CHLORIDE SHEATH TWO-LEAD TELEPHONE WIRE INCLUDED IN ASSY, COLORS- 1 BLUE, 2 RED, 2 BLACK AND 2 GREEN, PER ORNL INST DEPT SPEC IS-5-2 SAMUEL MOORE CO					
	FT	.65	3	15-282-2230	92
TUBING, POLYETHYLENE, BUNDLE 10 TUBE, EA TUBE 1/4 IN. OD, 1/16 IN. BLACK POLYVINYL CHLORIDE SHEATH OVERALL, TWO-LEAD TELEPHONE WIRES INCLUDED IN ASSY, ALL TUBES BLACK, EA TUBE NUMBER CODED AT 2 IN. INTERVALS. TUBES NUMBERED 1 THRU 10, WITH MYLAR SHEET BARRIER BETWEEN TUBE BUNDLE AND SHEATH, NO. PV-10-4, SAMUEL MOORE					
	FT	.52	3	15-282-2250	92
TUBING, POLYETHYLENE, PURE, 1/4 IN. OD TUBE, X 0.040 IN. WALL THK, COLOR TRANSLUCENT, ASTM D 1248, TYPE 1, CLASS B, GRADE 2, PLEXCO CO, NO SUB					
	FT	.02	1	15-282-2500	92
TUBING, POLYETHYLENE, PLASTIC, ASTM D 1248, TYPE 1, CLASS B, GRADE 2, UNREPROCESSED, NEUTRAL TRANSLUCENT COLOR, 1/16 IN. WALL THICKNESS					
OD IN.					
1/4	FT	.03	23	15-282-2510	92
3/8	FT	.04	3	15-282-2520	92
1/2	FT	.08	3	15-282-2530	92
5/8	FT	.04	2	15-282-2540	92
3/4	FT	.12	3	15-282-2550	92
TUBING, POLYETHYLENE, NON-PLASTICIZED, FOR PACKING FINISHED FLUOROETHENE CORES, 0.0015 IN. THK, 9 1/2 IN. FLAT LAY THK					
	LB	1.48	1	15-282-3200	92
TUBING, POLYETHYLENE, PLASTIC, ASTM D-1248, TYPE 1, CLASS A, GRADE 4, UNREPROCESSED, NATURAL COLOR, 1/4 IN. OD, 0.040 IN. WALL PLUS OR MINUS 0.0006 IN., NO. 44-P IMPERIAL-EASTMAN, POL-4 EXTRCN CORP, OR APPROVED EQUAL					
	FT	.02	1	15-282-3375	92
TUBING, POLYETHYLENE, PLASTIC, ASTM D-1248, TYPE II, CLASS C OR B, UNREPROCESSED, TO FIT SWAGELOK STD BRASS FITTINGS, 500 FT LGTH CN SPL					
1/4 IN. OD, PLUS 0.005 IN., MINUS 0.003 IN., WALL THICKNESS 0.040 IN., PLUS OR MINUS 0.005 IN. COLOR (SOLID OR STRIPES ON BLACK)					
BLACK	FT	.02	1235	15-282-3400	92
BLUE	FT	.03	123	15-282-3410	92
GREEN	FT	.03	123	15-282-3420	92
ORANGE	FT	.03	1	15-282-3423	92
PURPLE	FT	.02	2	15-282-3426	92
RED	FT	.03	123	15-282-3430	92
YELLOW	FT	.02	3	15-282-3440	92
3/8 IN. OD, PLUS OR MINUS 0.005 IN., WALL THICKNESS 0.062 IN., PLUS OR MINUS 0.005 IN. COLOR (SOLID OR STRIPES ON BLACK)					
BLACK	FT	.05	1 3	15-282-3500	92
BLUE	FT	.05	3	15-282-3505	92
GREEN	FT	.05	3	15-282-3510	92
RED	FT	.05	3	15-282-3520	92
TUBING, POLYSTYRENE					
ID IN.					
1/8	IN	.00	3	15-282-4110	92
1/4	IN	.03	3	15-282-4120	92
3/8	IN	.01	3	15-282-4130	92
1/2	IN	.01	3	15-282-4140	92
5/8	IN	.01	3	15-282-4150	92
3/4	IN	.06	3	15-282-4160	92
1	IN	.03	3	15-282-4170	92
1 3/4	IN	.04	3	15-282-4190	92
TUBING, PYREX GLASS, CAPILLARY, 0.250 PLUS 0.000 MINUS 0.018 IN. OD, 2 MM PLUS OR MINUS 0.010 IN. ID, 6 FT LGTHS, NO. 230329, CORNING					
	FT	.25	3	15-285-0110	36
TUBING, PYREX GLASS, 178 MM OD X APPROX 4 FT LGTH X STD WALL THICKNESS, NO. 234230, CORNING					
	FT	6.06	3	15-285-1015	36
TUBING, PYREX GLASS, CAPILLARY TYPE, 4 FT LGTH, CORNING					
BORE MM					
1/4 TO 3/4	FT	.08	3	15-285-1106	36
3/4 TO 1 1/4	FT	.11	3	15-285-1116	36

Attachment B

					UNIT	PRICE	STK	PT	CATALOG NO	BUYER
TUBING, PYREX GLASS, CAPILLARY TYPE, 4 FT LGTH, CORNING										
BORE MM		OD MM	MFR NO.		-CONTINUED-					
1 3/4 TO 2 1/4		7 TO 8	236540							
2 1/4 TO 3		8 TO 10	236560							
					FT	.15	3		15-285-1136	36
					FT	.30	1	3	15-285-1146	36
TUBING, PYREX GLASS, COMBUSTION, FOR TEMP NOT TO EXCEED 750 DEG C, OD 1/2 IN., WALL THK 3/32 IN., LGTH 4 FT, NO. 11-370, FISHER					LB	1.28	1		15-285-3106	36
TUBING, PYREX GLASS, HEAVY WALL, 3/8 IN. OD PLUS OR MINUS 0.023 IN., WALL THK IN. 5/64, LGTH 48 IN., CODE 237650, CORNING					LB	1.94	1		15-285-4106	36
TUBING, PYREX GLASS, SPECIAL WALL, CODE 234104, CORNING										
OD MM		WALL THK MM								
9		2			FT	.15	3		15-285-4200	36
9		2			LB	2.06	2		15-285-4206	36
TUBING, PYREX GLASS, MED WALL, 48 IN. LGTH, CORNING										
OD IN.		WALL IN.		CODE NO.						
1/4		3/64		237300	FT	.06	3		15-285-4216	36
1/2		1/16		237310	FT	.11	3		15-285-4218	36
TUBING, (PIPE), GLASS, BOROSILICATE, PYREX 7740 OR KIMAX KG-33										
10 IN.										
5	NON-PRECISION BORE, TEMPERED, STD WALL, WITH STD 5 IN. CONICAL FLANGED ENDS, 45 IN. OVERALL				EA	106.80	2		15-285-4256	97
2.005	PLUS OR MINUS 0.002, PRECISION BORE, ANNEALED, HEAVY WT, FLANGED ENDS, 10 OF FLANGE SECTION 0.062 IN. MINUS 0.000, 24 IN. LGTH, FISHER AND PORTER				EA	35.46	3		15-285-4271	97
6	NON-PRECISION BORE, TEMPERED, STD WALL WITH STD 6 IN. CONICAL FLANGED ENDS, 45 IN. OVERALL				PC	105.40	2		15-285-4298	97
TUBING, PYREX GLASS, STD WALL, 4 FT LGTH, CORNING										
OD MM	VAR MM	WALL THK MM	LB/FT	CORNING CODE						
4	0.3	0.8	0.012	234040	PC	.09	2		15-285-6111	36
5	0.3	0.8	0.016	234050	PC	.09	2		15-285-6116	36
6	0.3	1.0	0.023	234060	PC	.15	12		15-285-6121	36
7	0.3	1.0	0.028	234070	PC	.19	12		15-285-6126	36
8	0.4	1.0	0.033	234080	PC	.62	12		15-285-6131	36
9	0.4	1.0	0.038	234090	PC	.33	2		15-285-6136	36
10	0.4	1.0	0.042	234100	PC	.29	12		15-285-6141	36
12	0.4	1.0	0.052	234120	PC	.32	12		15-285-6151	36
13	0.4	1.2	0.067	234130	PC	.39	2		15-285-6156	36
15	0.4	1.2	0.078	234150	PC	.50	12		15-285-6166	36
16	0.4	1.2	0.083	234160	PC	.69	1		15-285-6171	36
17	0.5	1.2	0.090	234170	PC	.62	3		15-285-6176	36
18	0.5	1.2	0.095	234180	PC	.64	1		15-285-6181	36
20	0.6	1.2	0.106	234200	PC	.55	2		15-285-6191	36
22	0.6	1.5	0.145	234220	PC	.90	12		15-285-6196	36
25	0.6	1.5	0.166	234250	PC	.86	12		15-285-6201	36
28	0.7	1.5	0.187	234280	PC	1.49	2		15-285-6206	36
30	0.7	1.8	0.238	234300	PC	1.60	12		15-285-6211	36
32	0.8	1.8	0.255	234320	PC	1.74	2		15-285-6216	36
35	0.8	2.0	0.31	234350	PC	2.01	1		15-285-6221	36
38	0.9	2.0	0.34	234380	PC	1.80	2		15-285-6226	36
41	0.9	2.0	0.37	234410	PC	2.48	12		15-285-6231	36
45	1.0	2.0	0.41	234450	PC	2.71	2		15-285-6236	36
51	1.0	2.0	0.45	234510	PC	3.18	12		15-285-6246	36
54	1.0	2.4	0.58	234540	PC	4.05	2		15-285-6251	36
60	1.1	2.4	0.66	234600	PC	4.44	12		15-285-6261	36
64	1.2	2.4	0.69	234640	PC	1.20	1		15-285-6266	36
70	1.2	2.4	0.75	234700	PC	6.47	1		15-285-6271	36
75	1.3	2.4	0.81	234750	PC	7.20	2		15-285-6276	36
80	1.3	2.4	0.88	234800	PC	6.65	2		15-285-6281	36
90	1.3	2.4	1.00	234900	PC	8.00	2		15-285-6291	36
100	1.4	2.4	1.112	234000	PC	9.95	2		15-285-6296	36
TUBING, PYREX GLASS, STD WALL, CORNING										
OD MM				CORNING CODE						
110				234310	FT	2.56	3		15-285-6401	36
120				234330	FT	3.43	3		15-285-6406	36
125				234340	FT	3.15	3		15-285-6411	36
130				234360	FT	3.68	3		15-285-6416	36
140				234370	FT	4.57	3		15-285-6421	36
150				234390	FT	5.08	3		15-285-6426	36
TUBING, PYREX GLASS, STD WALL, 4 FT LGTH, CORNING										
OD MM	VAR MM	WALL THK MM	LB/FT	MFR NO.						
4	0.3	0.8	0.012	234040	FT	.02	3		15-285-6511	36
5	0.3	0.8	0.016	234050	FT	.03	3		15-285-6516	36

Attachment B

					UNIT	PRICE	STK PT	CATALOG NO	BUYER
TUBING, PYREX GLASS, STD WALL, 4 FT LGTH, CORNING									
OD	VAR	WALL THK	MFR	-CONTINUED-					
MM	MM	MM	NO.						
6	0.3	1.0	0.023	234060	FT	.04	3	15-285-6521	36
7	0.3	1.0	0.028	234070	FT	.04	3	15-285-6526	36
8	0.4	1.0	0.033	234080	FT	.05	3	15-285-6531	36
9	0.4	1.0	0.038	234090	FT	.07	3	15-285-6536	36
10	0.4	1.0	0.042	234100	FT	.09	3	15-285-6541	36
11	0.4	1.0	0.047	234110	FT	.07	3	15-285-6546	36
12	0.4	1.0	0.052	234120	FT	.09	3	15-285-6551	36
13	0.4	1.2	0.067	234130	FT	.25	3	15-285-6556	36
14	0.4	1.2	0.072	234140	FT	.13	3	15-285-6561	36
15	0.4	1.2	0.078	234150	FT	.13	3	15-285-6566	36
16	0.4	1.2	0.083	234160	FT	.14	3	15-285-6571	36
18	0.5	1.2	0.095	234180	FT	.17	3	15-285-6581	36
19	0.5	1.2	0.100	234190	FT	.15	3	15-285-6586	36
20	0.6	1.2	0.106	234200	FT	.18	3	15-285-6591	36
22	0.6	1.5	0.145	234220	FT	.21	3	15-285-6596	36
25	0.6	1.5	0.166	234250	FT	.29	3	15-285-6601	36
28	0.7	1.5	0.187	234280	FT	.26	3	15-285-6606	36
30	0.7	1.8	0.238	234300	FT	.41	3	15-285-6611	36
32	0.8	1.8	0.255	234320	FT	.28	3	15-285-6616	36
35	0.8	2.0	0.31	234350	FT	.52	3	15-285-6621	36
38	0.9	2.0	0.34	234380	FT	.61	3	15-285-6626	36
41	0.9	2.0	0.37	234410	FT	.93	3	15-285-6631	36
45	1.0	2.0	0.41	234450	FT	.67	3	15-285-6636	36
48	1.0	2.0	0.43	234480	FT	.75	3	15-285-6641	36
51	1.0	2.0	1.45	234510	FT	.66	3	15-285-6646	36
54	1.0	2.4	0.58	234540	FT	.77	3	15-285-6651	36
57	1.0	2.4	0.61	234570	FT	1.07	3	15-285-6656	36
60	1.1	2.4	0.66	234600	FT	.56	3	15-285-6661	36
64	1.2	2.4	0.69	234640	FT	1.29	3	15-285-6666	36
70	1.2	2.4	0.75	234700	FT	1.78	3	15-285-6671	36
75	1.3	2.4	0.81	234750	FT	1.65	3	15-285-6676	36
80	1.3	2.4	0.88	234800	FT	1.48	3	15-285-6681	36
85	1.3	2.4	0.94	234850	FT	1.82	3	15-285-6686	36
90	1.3	2.4	1.00	234900	FT	2.03	3	15-285-6691	36
100	1.4	2.4	1.112	234000	FT	2.03	3	15-285-6696	36
TUBING, PYREX GLASS, FLANGED BOTH ENDS, FISCHER AND PORTER									
ID IN.	LGTH IN.								
1/4	6			EA	1.91	3	15-286-2105	97	
1/4	12			EA	1.64	3	15-286-2110	97	
1/4	24			EA	1.80	3	15-286-2115	97	
1/4	48			EA	2.67	3	15-286-2125	97	
3/8	6			EA	3.11	3	15-286-2130	97	
3/8	36			EA	4.25	3	15-286-2145	97	
3/8	48			EA	3.33	3	15-286-2148	97	
1/2	6			EA	4.14	3	15-286-2150	97	
1/2	12			EA	2.78	3	15-286-2155	97	
1/2	24			EA	3.95	3	15-286-2160	97	
1/2	36			EA	3.56	3	15-286-2165	97	
1/2	48			EA	4.68	3	15-286-2170	97	
1/2	72			EA	4.29	3	15-286-2173	97	
3/4	6			EA	2.85	3	15-286-2175	97	
3/4	12			EA	4.50	3	15-286-2180	97	
3/4	24			EA	3.66	3	15-286-2185	97	
3/4	36			EA	5.60	3	15-286-2190	97	
TUBING, PYREX GLASS, HEAVY WALL, WITHOUT FLANGES, CORNING									
OD IN.	WALL THK IN.	CODE NO.							
1/2	3/32	237500	FT	.42	23	15-286-3105	97		
5/8	3/32	237660	FT	.05	2	15-286-3110	97		
3/4	1/8	237510	FT	.85	3	15-286-3115	97		
1	5/32	237520	FT	.78	3	15-286-3120	97		
TUBING, (PIPE), GLASS, BOROSILICATE, PYREX 7740 OR KIMAX KG-33, CONICAL FLANGED ENDS, 1 1/2 IN. ID, 1 27/32 IN. OD, LGTH 48 IN., CODE 72-7130									
			EA	12.32	3	15-286-4800	97		
TUBING, (PIPE), GLASS, BOROSILICATE, PYREX 7740 OR KIMAX KG-33, STD WALL, TEMPERED, CONICAL FLANGED ENDS									
ID IN.	LGTH IN.	CODE NO.							
1	3	72-1590	EA	8.55	2	15-286-5105	97		
1	6	72-1550	EA	6.41	3	15-286-5135	97		
1	10	SPECIAL	EA	9.66	2	15-286-5165	97		
1	12	72-7010	EA	7.50	23	15-286-5175	97		
1	24	72-7020	EA	7.07	23	15-286-5215	97		
1	36	72-7030	EA	10.02	23	15-286-5235	97		
1	48	72-7040	EA	9.86	3	15-286-5245	97		
1	60	72-7050	EA	15.40	2	15-286-5250	97		
1	120	72-4500	EA	13.17	2	15-286-5275	97		
1 1/2	6	72-1560	EA	7.74	3	15-286-5295	97		
1 1/2	12	72-7100	EA	10.71	3	15-286-5315	97		
1 1/2	18	72-7105	EA	9.53	2	15-286-5320	97		
1 1/2	24	72-7110	EA	10.04	3	15-286-5325	97		
1 1/2	36	72-7120	EA	13.90	3	15-286-5330	97		
1 1/2	60	72-7140	EA	14.10	2	15-286-5340	97		
2	6	72-1670	EA	11.29	23	15-286-5355	97		

Attachment B

					UNIT	PRICE	STK	PT	CATALOG NO	BUYER
TUBING, (PIPE), GLASS, BOROSILICATE, PYREX 7740 OR KIMAX KG-33, STD WALL, TEMPERED, CONICAL FLANGED ENDS										
1D IN.	LGTH IN.	CODE NO.	-CONTINUED-							
2	8	SPECIAL	EA	12.79	2	15-286-5365	97			
2	12	72-7190	EA	11.94	23	15-286-5370	97			
2	18	72-7195	EA	12.85	2	15-286-5385	97			
2	24	72-7200	EA	15.45	3	15-286-5390	97			
2	30	72-7541	EA	17.55	3	15-286-5395	97			
2	36	72-7210	EA	14.71	23	15-286-5400	97			
2	48	72-7220	EA	18.36	23	15-286-5405	97			
2	72	72-7502	EA	22.16	2	15-286-5415	97			
2	120	72-4520	EA	28.28	2	15-286-5420	97			
3	10	SPECIAL	EA	31.69	2	15-286-5440	97			
3	12	72-7280	EA	16.71	3	15-286-5445	97			
3	18	72-7285	EA	18.72	2	15-286-5450	97			
3	24	72-7290	EA	20.22	23	15-286-5455	97			
3	36	72-7300	EA	27.21	23	15-286-5465	97			
3	48	72-7310	EA	30.29	23	15-286-5470	97			
4	8	SPECIAL	EA	28.34	2	15-286-5485	97			
4	12	72-7370	EA	24.95	23	15-286-5490	97			
4	24	72-7380	EA	29.48	23	15-286-5495	97			
4	36	72-7390	EA	33.10	23	15-286-5500	97			
4	48	72-7400	EA	37.45	23	15-286-5505	97			
6	12	72-1360	EA	36.34	2	15-286-5515	97			
6	18	72-1365	EA	39.50	2	15-286-5517	97			
6	24	72-1380	EA	51.56	23	15-286-5520	97			
6	36	72-1410	EA	50.22	2	15-286-5525	97			
6	48	72-1420	EA	55.39	23	15-286-5530	97			
6	60	72-1430	EA	68.73	2	15-286-5535	97			
6	72	72-7505	EA	68.10	2	15-286-5540	97			

TUBING, QUARTZ, CLEAR FUSED, HEAVY WALL, 99.8 PER CENT SILICON DIOXIDE MIN. 2.0 MM WALL THICKNESS, 48 IN. LGTHS, AMERSIL QUARTZ DIV, ENGELHARD INDUSTRIES INC

1D MM							
4	IN	.10	3	15-288-1810	97		
6	IN	.18	3	15-288-1820	97		
8	IN	.20	3	15-288-1830	97		
11	IN	.24	3	15-288-1840	97		
14	IN	.35	3	15-288-1850	97		
18	IN	.37	3	15-288-1860	97		
20	IN	.38	3	15-288-1870	97		
24	IN	.40	3	15-288-1880	97		
30	IN	.65	3	15-288-1890	97		
34	IN	.63	3	15-288-1900	97		
40	IN	.55	3	15-288-1910	97		

TUBING, QUARTZ, FUSED, CLEAR, 48 IN. LGTH, Y-MS-121

OD MM	WALL THK MM						
3	1.0	IN	.03	3	15-288-2101	97	
3	0.5	IN	.02	23	15-288-2111	97	
4	0.5	IN	.03	3	15-288-2121	97	
6	1.0	IN	.07	23	15-288-2131	97	
8	1.0	IN	.07	23	15-288-2151	97	
9	1.0	IN	.06	2	15-288-2171	97	
10	1.0	IN	.08	23	15-288-2181	97	
12	1.0	IN	.17	23	15-288-2201	97	
13	1.0	IN	.11	2	15-288-2208	97	
15.2	1.6	IN	.19	23	15-288-2211	97	
18	1.0	IN	.17	23	15-288-2231	97	
21.6	1.8	IN	.32	3	15-288-2235	97	
23.6	1.8	IN	.40	3	15-288-2251	97	
25	1.5	IN	.34	23	15-288-2271	97	
28.8	1.9	IN	.52	23	15-288-2281	97	
30	1.5	IN	.39	123	15-288-2291	97	
34	2.0	IN	.66	3	15-288-2301	97	
35	1.5	IN	.50	2	15-288-2311	97	
38	1.5	IN	.55	23	15-288-2321	97	
43	1.5	IN	.63	3	15-288-2341	97	
54	2.0	IN	1.02	3	15-288-2351	97	
84	2.0	IN	1.89	3	15-288-2361	97	

TUBING, QUARTZ, FUSED, TRANSPARENT, 2 IN. ID X 1.75 MM WALL X 30 IN. LGTH, Y-MS-121

IN	.63	2	15-288-4401	97		
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TUBING, QUARTZ, FUSED, TRANSPARENT, 0.056 IN. OD PLUS OR MINUS 8 PER CENT, 0.025 IN. ID PLUS OR MINUS 0.005 IN. IN RANDOM LGTHS OF NOT LESS THAN 6 IN., GE, Y-MS-121

IN	.05	2	15-288-4501	97		
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TUBING, QUARTZ, FUSED, TRANSPARENT, SINGLE BORE, 24 IN. LGTH, 2.0 ID MM, 8.0 OD MM, NO. 5, GE, Y-MS-121

IN	.19	3	15-288-4521	97		
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TUBING, QUARTZ, FUSED, TRANSPARENT, 0.5 TO 1.0 MM ID X 5.5 TO 6.5 MM OD X 18 IN. LGTH, Y-MS-121

IN	.03	3	15-288-4551	97		
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TUBING, QUARTZ, FUSED, TRANSPARENT, OPEN ENDS, 4 IN. OD X 1/8 IN. WALL X 24 IN. LGTH, WALL THICKNESS CRITICAL, GE, Y-MS-121

IN	3.88	3	15-288-4801	97		
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Attachment B

	UNIT	PRICE	STK PT	CATALOG NO	BUYER
TUBING, QUARTZ, FUSED, TRANSPARENT, WITH TEST TUBE END, 2 1/2 IN. ID X 1.75 MM WALL X 30 IN. LGTH, Y-MS-121	EA	35.00	23	15-288-5501	97
TUBING, RUBBER, BLACK, INSERTED FABRIC REINFORCED, 1/4 IN. ID, WALL THK 1/8 IN., WILL VWR 56435-187	FT	.00	1	15-291-1112	36
TUBING, RUBBER, BUNA ID IN. WALL THK IN.					
1/8 1/16	FT	.00	2	15-291-2102	36
1/4 1/8	FT	.00	2	15-291-2112	36
1/2 1/8	FT	.00	2	15-291-2132	36
				METTLER 300	
				METTLER 300	
				METTLER 300	
TUBING, RUBBER, NEOPRENE ID IN. WALL THK IN.					
1/8 1/16	FT	.00	2	15-291-4102	36
3/16 3/64	FT	.07	3	15-291-4112	36
1/4 1/16	FT	.00	23	15-291-4122	36
1/4 3/16	FT	.12	3	15-291-4132	36
5/16 3/32	FT	.00	1 3	15-291-4142	36
3/8 1/8	FT	.00	23	15-291-4152	36
1/2 3/32	FT	.00	3	15-291-4162	36
1/2 5/16	FT	.79	3	15-291-4164	36
				MATHESON 57910-05	
				VWR 56429-151	
				VWR 56429-184	
				SARGENT S-73655-X	
				VWR 56429-210	
				VWR 56429-242	
				VWR 56429-275	
				PREISER 13-8895-31	
TUBING, RUBBER, PRESSURE AND VACUUM, RED, HIGH QUALITY RED RUBBER TUBING FOR PRESSURE AND VACUUM, FLEXIBLE, 1/4 IN. ID, WALL THK 3/16 IN., PREISER 13-8880-12 OR VWR 56433-239	FT	.35	2	15-291-4480	36
TUBING, RUBBER, PRESSURE AND VACUUM, BLACK, HIGH QUALITY RUBBER, FLEXIBLE, 3/8 IN. ID, 1/4 IN. WALL, FSC0 14-175E OR VWR 56430-321	FT	.59	2	15-291-4500	36
TUBING, RUBBER, PRESSURE AND VACUUM, BLACK WITH HEAVY WALL, 1/2 IN. ID, WALL THK 1/4 IN., NO. 13-8885, PREISER, MATHESON 58050-50	FT	.49	2	15-291-4520	36
TUBING, RUBBER, LATEX, AMBER, TRANSLUCENT, MS 15-AC- 11A					
LIGHT WALL ID IN. WALL THK IN.					
1/8 1/32	FT	.05	123	15-291-6112	36
1/8 3/64	FT	.21	1235	15-291-6117	36
1/8 1/16	FT	.07	2	15-291-6122	36
3/16 1/16	FT	.07	1235	15-291-6132	36
1/4 1/16	FT	.09	1235	15-291-6133	36
5/16 1/16	FT	.10	1235	15-291-6134	36
3/8 1/16	FT	.14	12	15-291-6135	36
1/2 3/32	FT	.28	123	15-291-6136	36
HEAVY WALL ID IN. WALL THK IN.					
3/16 3/32	FT	.09	1235	15-291-6137	36
3/16 1/8	FT	.13	1235	15-291-6142	36
1/4 3/32	FT	.14	123	15-291-6157	36
1/4 1/8	FT	.16	1235	15-291-6162	36
5/16 3/32	FT	.14	123	15-291-6182	36
5/16 1/8	FT	.19	1 5	15-291-6187	36
3/8 3/32	FT	.16	123	15-291-6207	36
3/8 1/8	FT	.27	1235	15-291-6212	36
1/2 1/8	FT	.40	235	15-291-6232	36
1/2 3/16	FT	.58	5	15-291-6237	36
3/4 1/4	FT	.84	1 3	15-291-6277	36
1 1/4	FT	1.30	1	15-291-6287	36
PRESSURE ID IN. WALL THK IN.					
1/8 3/16	FT	.20	123	15-291-6300	36
1/4 3/16	FT	.25	1235	15-291-6306	36
5/16 3/16	FT	.29	123	15-291-6309	36
3/8 3/16	FT	.35	1235	15-291-6312	36
1/2 1/4	FT	.58	1235	15-291-6315	36
5/8 1/4	FT	.64	1235	15-291-6318	36
TUBING, RUBBER, PURE GUM, AMBER, SUITABLE FOR HIGH VACUUM, SIZE 3/4 IN. ID X 3/8 IN. WALL, SPEC ZZ- T-831B, FILLAUER SURGICAL SUPPLY CO	FT	1.32	23	15-291-7002	36
TUBING, RUBBER, PURE GUM, AMBER, SUITABLE FOR HIGH VACUUM, SIZE 1 IN. ID X 3/8 IN. WALL, SPEC ZZ-T- 831B, FILLAUER SURGICAL SUPPLY CO	FT	1.84	3	15-291-7022	36
TUBING, RUBBER, PURE GUM, GOOCH STYLE, TRANSLUCENT ID IN. FLAT WIDTH IN.					
5/8 PREISER 13-9080/03 FSC0 14-1A0A	FT	.00	23	15-291-7102	36

Attachment B

				UNIT	PRICE	STK PT	CATALOG NO	BUYER
TUBING, PLASTIC, TRANSPARENT, TENSIL STRENGTH, 3000 LB/SQ IN., DIELECTRIC STRENGTH* DRY 1000 VOLT/MIL, WET 800 VOLT/MIL, WATER ABSORPTION* 0.4 PER CENT IN WEIGHT AFTER 24 HRS IMMERSION, OPERATING TEMP UP TO 180 DEG F, SULFLEX OR MMM CO								
10 IN.	WALL THK IN.	SIZE NO.	-CONTINUED-					
1.000	0.035	1 IN.		FT	.29	1 3	15-303-1782	92
TUBING, PLASTIC, TRANSPARENT TRANSFLEX, IRVINGTON VARNISH AND INSULATOR CO								
SIZE	ID. IN.	NOM						
AWG	MAX	MIN						
10	0.112	0.102	0.106	FT	.03	1	15-303-9000	92
4	0.224	0.204	0.208	FT	.05	1	15-303-9030	92
2	0.278	0.258	0.263	FT	.06	1	15-303-9040	92
TUBING, NON-RIGID, POLYVINYL CHLORIDE, FOR GENERAL LABORATORY USE, MS 15-AC-16A								
DIM. IN.								
10	WALL THK	OD						
1/16	3/32	1/4		FT	.02	23	15-306-2100	92
1/8	1/16	1/4		FT	.02	123	15-306-2110	92
3/16	1/16	5/16		FT	.02	23	15-306-2120	92
3/16	3/32	3/8		FT	.04	23	15-306-2130	92
1/4	1/16	3/8		FT	.03	1235	15-306-2140	92
1/4	1/8	1/2		FT	.06	12 5	15-306-2142	92
1/4	5/32	9/16		FT	.07	23	15-306-2150	92
1/4	3/16	5/8		FT	.09	23	15-306-2160	92
5/16	1/16	7/16		FT	.03	23	15-306-2170	92
5/16	1/8	9/16		FT	.06	1	15-306-2172	92
3/8	1/16	1/2		FT	.04	23	15-306-2180	92
3/8	1/8	5/8		FT	.08	123	15-306-2190	92
3/8	3/16	3/4		FT	.23	5	15-306-2192	92
7/16	1/8	11/16		FT	.09	1	15-306-2194	92
1/2	1/16	5/8		FT	.05	1235	15-306-2200	92
1/2	1/8	3/4		FT	.11	23	15-306-2210	92
1/2	3/16	7/8		FT	.19	2 5	15-306-2212	92
1/2	3/8	1 1/4		FT	.81	1 5	15-306-2220	92
5/8	1/8	7/8		FT	.12	23	15-306-2230	92
5/8	3/16	1		FT	.18	23	15-306-2240	92
3/4	1/8	1		FT	.14	1235	15-306-2250	92
3/4	3/16	1 1/8		FT	.39	5	15-306-2252	92
3/4	3/8	1 1/2		FT	.61	2	15-306-2255	92
7/8	3/16	1 1/4		FT	.30	23	15-306-2260	92
1	1/8	1 1/4		FT	.19	123	15-306-2270	92
1	1/4	1 1/2		FT	.46	1	15-306-2272	92
1 1/4	1/8	1 1/2		FT	.26	12	15-306-2280	92
TUBING, TYGON, CRYSTAL CLEAR, 5/16 IN. ID X 1/8 IN. WALL THK X 9/16 IN. OD, FORMULATION B44-3, U S STONEWARE								
				FT	.43	1	15-306-3040	92
TUBING, VYCOR, STD WALL, 36 IN. LGTH, CORNING								
OD MM	WALL MM	CODE NO.						
30	1.8	744381		PC	11.96	3	15-310-5000	36
45	2.4	744383		PC	18.77	3	15-310-5020	36
51	2.4	744384		PC	30.74	3	15-310-5040	36
<u>TUBE FITTINGS, BOROSILICATE GLASS</u>								
ADAPTOR, INTER-JOINT, BOROSILICATE GLASS, NO. J-205, SGA								
SIZE	S/T JOINT NO.	LABGLASS NO.						
	FEMALE	MALE						
RB	12/30	45/50	LG-1190-C-6	EA	4.35	3	15-315-1607	36
BD	14/35	19/38	LG-1190-D-1	EA	3.03	3	15-315-1617	36
BR	19/38	14/35	LG-1200-A-3	EA	3.03	3	15-315-1627	36
CH	19/38	55/50	LG-1190-E-7	EA	5.27	3	15-315-1637	36
CM	24/40	10/30	LG-1200-B-1	EA	2.72	3	15-315-1647	36
CO	24/40	19/38	LG-1200-B-4	EA	3.19	3	15-315-1657	36
CP	24/40	24/40	LG-1190-F	EA	3.21	3	15-315-1667	36
DL	29/42	19/38	LG-1200-C-3	EA	3.06	3	15-315-1677	36
DM	29/42	24/40 (ACE 5005-24)	LG-1200-C-4	EA	3.55	3	15-315-1687	36
EB	34/45	19/38	LG-1200-D-1	EA	3.54	3	15-315-1697	36
EC	34/45	24/40	LG-1200-D-2	EA	3.66	3	15-315-1707	36
ADAPTOR, STOPCOCK, BOROSILICATE GLASS, LAPINE								
SIZE MM	MFR NO.							
2	(SARGENT 5-77353A)	C-3800A		EA	2.40	3	15-315-2107	36
2	(MATHESON 6442-10)	N-3800A		EA	.00	3	15-315-2117	36
4	(MATHESON 6442-20)	N-3800B		EA	.00	3	15-315-2137	36
ADAPTOR, TUBE, BOROSILICATE GLASS, 105 DEG ANGLE, 24/40 S/T JOINT, CORNING 8840 OR KIMBLE 10010								
				EA	2.45	3	15-315-3117	36
ADAPTOR, TUBE, REDUCING, BOROSILICATE GLASS, NO. 8820, CORNING								
S/T JOINT NO.								
FEMALE	MALE							
10/30	19/38			EA	3.71	3	15-315-5127	36
10/30	24/40			EA	3.23	3	15-315-5137	36
14/35	24/40			EA	3.43	3	15-315-5177	36
19/38	24/40			EA	3.48	3	15-315-5187	36

<u>TUBE FITTINGS, BOROSILICATE GLASS</u>		UNIT	PRICE	STK PT	CATALOG NO	BUYER
ADAPTOR, TUBE, REDUCING, BOROSILICATE GLASS, NO. 8820, CORNING						
S/T JOINT NO.		-CONTINUED-				
19/38	29/42	EA	4.25	3	15-315-5197	36
19/38	45/50	EA	5.98	23	15-315-5217	36
24/40	29/42	EA	3.69	3	15-315-5227	36
24/40	34/45	EA	4.15	3	15-315-5237	36
24/40	45/50	EA	5.31	3	15-315-5247	36
ADAPTOR, TUBE, REDUCING, BOROSILICATE GLASS, BUSHING TYPE, NO. 8825, CORNING						
S/T JOINT NO.						
OUTER	INNER					
24/40	19/38	EA	2.46	23	15-315-5607	36
29/42	24/40	EA	3.07	23	15-315-5617	36
34/45	24/40	EA	3.53	3	15-315-5627	36
34/45	29/42	EA	3.33	3	15-315-5637	36
JOINT, GROUND, BALL AND SOCKET, BALL ONLY, BOROSILICATE GLASS, CORNING 6762 OR KIMBLE 33602						
S/T NO.						
12/1		EA	2.01	23	15-318-1000	36
12/1 1/2		EA	1.75	3	15-318-1010	36
12/2		EA	1.75	23	15-318-1020	36
12/3		EA	1.49	3	15-318-1030	36
12/5		EA	1.46	23	15-318-1040	36
18/7		EA	1.54	23	15-318-1050	36
18/9		EA	1.69	23	15-318-1060	36
28/12		EA	1.68	3	15-318-1080	36
28/15		EA	2.42	23	15-318-1090	36
35/20		EA	2.03	3	15-318-1100	36
35/25		EA	2.14	23	15-318-1110	36
50/30		EA	4.38	3	15-318-1120	36
65/40		EA	4.57	23	15-318-1130	36
75/50		EA	8.15	3	15-318-1140	36
JOINT, GROUND, BALL AND SOCKET, SOCKET ONLY, BOROSILICATE GLASS, FEMALE, CORNING 6764 OR KIMBLE 33604						
S/T NO.						
12/1		EA	2.03	23	15-318-1600	36
12 1 1/2		EA	2.08	3	15-318-1610	36
12/2		EA	2.08	23	15-318-1620	36
12/3		EA	1.67	3	15-318-1630	36
12/5		EA	2.02	23	15-318-1640	36
18/7		EA	1.75	23	15-318-1650	36
18/9		EA	1.80	23	15-318-1660	36
28/12		EA	1.93	3	15-318-1670	36
28/15		EA	2.09	23	15-318-1680	36
35/20		EA	2.28	23	15-318-1690	36
35/25		EA	2.28	23	15-318-1700	36
50/30		EA	NA	3	15-318-1710	36
65/40		EA	5.54	3	15-318-1720	36
75/50		EA	6.51	3	15-318-1730	36
JOINT, GROUND, FULL LGTH, BOROSILICATE GLASS, S/T INTERCHANGEABLE, S/T NO. 103/60, 100 MM OD STRAIGHT TUBING, NO. 7545, ACE GLASS						
PART						
OUTER (LABGLASS LG-1001)		EA	10.30	2	15-318-1980	36
JOINT, GROUND, FULL LGTH, INNER PT ONLY, BOROSILICATE GLASS, S/T INTERCHANGEABLE, MALE, CORNING 6560, KIMBLE 33502						
S/T NO.						
7/25		EA	1.46	3	15-318-2010	36
10/30		EA	1.02	1235	15-318-2020	36
12/30		EA	1.14	23	15-318-2030	36
14/35		EA	1.23	235	15-318-2040	36
19/38		EA	1.52	123	15-318-2050	36
24/40		EA	1.57	1235	15-318-2060	36
29/42		EA	1.61	123	15-318-2070	36
34/45		EA	1.96	23	15-318-2080	36
40/50		EA	2.59	3	15-318-2090	36
45/50		EA	3.31	23	15-318-2100	36
60/60		EA	3.62	3	15-318-2110	36
55/50		EA	3.91	3	15-318-2120	36
60/50		EA	4.91	23	15-318-2130	36
71/60		EA	5.51	23	15-318-2140	36
JOINT, GROUND, FULL LGTH, OUTER PART ONLY, BOROSILICATE GLASS, S/T INTERCHANGEABLE, FEMALE, NO. 6580, CORNING OR NO. 33510, KIMBLE						
S/T NO.						
5/20		EA	1.02	3	15-318-4000	36
7/25		EA	1.26	23	15-318-4010	36
10/30		EA	1.47	1235	15-318-4020	36
12/30		EA	1.46	23	15-318-4030	36
14/35		EA	1.54	23	15-318-4040	36
19/38		EA	1.61	123	15-318-4050	36
24/40		EA	2.18	235	15-318-4060	36
29/42		EA	1.89	123	15-318-4070	36

Attachment B

<u>TUBE FITTINGS, BOROSILICATE GLASS</u>					UNIT	PRICE	STK PT	CATALOG NO	BUYER
JOINT, GROUND, FULL LGTH, OUTER PART ONLY, BORO-SILICATE GLASS, S/T INTERCHANGEABLE, FEMALE, NO. 6580, CORNING OR NO. 33510, KIMBLE					-CONTINUED-				
S/T NO.									
34/45					EA	2.60	23	15-318-4080	36
40/50					EA	3.08	23	15-318-4090	36
45/50					EA	3.77	23	15-318-4100	36
50/50					EA	4.04	3	15-318-4110	36
55/50					EA	4.44	23	15-318-4120	36
60/50					EA	5.03	23	15-318-4130	36
71/60					EA	7.20	23	15-318-4140	36
JOINT, GROUND, MED LGTH, INNER PT ONLY, BOROSILICATE GLASS, S/T INTERCHANGEABLE, CORNING 6620 OR KIMBLE 33562									
S/T NO.									
5/12					EA	1.14	3	15-318-4580	36
7/15					EA	1.13	3	15-318-4590	36
10/18					EA	1.01	3	15-318-4600	36
19/22					EA	1.34	3	15-318-4610	36
12/18					EA	1.23	3	15-318-4620	36
14/20					EA	1.22	23	15-318-4630	36
24/25					EA	NA	3	15-318-4640	36
JOINT, GROUND, MED LGTH, OUTER PT ONLY, BOROSILICATE GLASS, S/T INTERCHANGEABLE, CORNING 6640 OR KIMBLE 33564									
S/T NO.									
5/12					EA	1.14	3	15-318-4780	36
7/15					EA	1.35	3	15-318-4790	36
10/18					EA	1.41	3	15-318-4800	36
12/18					EA	1.46	3	15-318-4810	36
14/20					EA	1.57	23	15-318-4820	36
19/22					EA	1.61	3	15-318-4830	36
JOINT, INTER-JOINT, CAPILLARY, BOROSILICATE GLASS									
TYPE	ID	S/T JOINT	SGA	LABGLASS					
	MM	NO.	NO.	NO.					
MALE	1.0	10/30	J-160	LG-1150-3	EA	2.01	3	15-318-6530	36
MALE	1.5	10/30	J-160	LG-1150-4	EA	1.55	3	15-318-6540	36
MALE	2.0	10/30	J-160	LG-1150-5	EA	1.60	3	15-318-6550	36
JOINT, INTER-JOINT, BOROSILICATE, MERCURY SEAL, S/T 7/25, SGA J-175					EA	1.54	3	15-318-6865	36
JOINT, INTER-JOINT, WITH REDUCED TUBE, BOROSILICATE GLASS, LABGLASS NO. LG-1170									
S/T NO.									
7/25				TUBE OD MM	EA	1.01	3	15-318-7100	36
10/30				4	EA	1.41	3	15-318-7110	36
12/30 (ACE 7630-06)				5	EA	1.56	3	15-318-7120	36
14/35				7	EA	1.54	3	15-318-7130	36
19/38 (ACE 7630-10)				9	EA	1.74	3	15-318-7140	36
24/40				10	EA	1.79	23	15-318-7150	36
29/42				12	EA	1.96	3	15-318-7160	36
34/45				13	EA	2.63	3	15-318-7170	36
JOINT, O-RING, PLAIN, CORNING 6780 OR KIMBLE 33650									
APPROX	CLAMP SIZE			QUANTITY					
ID MM	JOINT			PER PKG					
5	12/5			24	EA	1.58	3	15-318-7500	36
7	18/7			24	EA	1.35	3	15-318-7510	36
9	18/9			24	EA	1.35	3	15-318-7520	36
15	28/15			24	EA	1.85	3	15-318-7530	36
20	35/20			24	EA	1.51	3	15-318-7540	36
25	35/25			24	EA	1.51	3	15-318-7550	36
40	65/40			8	EA	3.24	3	15-318-7560	36
JOINT, SEMI-BALL, BOROSILICATE GLASS, 6 IN. LGTH									
TYPE	SEMI BALL	TUBE							
	BALL DIA	ID	SGA	LABGLASS					
	SIZE MM	MM	NO.	NO.					
INNER BALL	40/25	40	25	JJ-1275	EA	1.95	3	15-318-7600	36
INNER BALL	102/75	10	75	JJ-1275	EA	10.95	3	15-318-7620	36
OUTER SOCKET 28/11 28 11 JJ-1275 LG-1041 (ACE NO. 7655-30)					EA	1.53	3	15-318-7640	36
OUTER SOCKET 40/25 40 25 JJ-1275 LG-1041					EA	2.79	3	15-318-7660	36
OUTER SOCKET 102/75 10 75 JJ-1275 LG-1041					EA	10.26	3	15-318-7680	36
SEAL, O-RINGS ONLY, BUNA N, MIN QUANTITY 12, CORNING 6780 OR KIMBLE 33652									
SIZE									
15-110					EA	.12	3	15-320-1500	36
15-111					EA	.12	3	15-320-1510	36
15-112					EA	.13	3	15-320-1520	36
15-116					EA	.64	3	15-320-1530	36
15-214					EA	.17	3	15-320-1540	36
15-124					EA	.18	3	15-320-1550	36
15-226					EA	.17	3	15-320-1560	36

Attachment B

<u>TUBE FITTINGS, FOR BOROSILICATE GLASS PIPE</u>		UNIT	PRICE	STK PT	CATALOG NO	BUYER
ADAPTOR, BUTTON, NICKEL PLATED STEEL, FOR BORO-SILICATE GLASS PIPE, CODE 72-9651		EA	.06	2	15-321-1201	97
COUPLING, GLASS TO GLASS, 24 ST ALUMINUM, BORO-SILICATE GLASS, FISCHER AND PORTER						
ID IN.						
1/4		EA	3.80	3	15-321-4201	97
1		EA	5.86	3	15-321-4221	97
COUPLING, METAL TO GLASS, 24 ST ALUMINUM, 303 STAINLESS STEEL, BOROSILICATE GLASS, FISCHER AND PORTER						
ID IN.						
1/4		EA	4.84	3	15-321-4401	97
3/4		EA	6.37	3	15-321-4411	97
1		EA	8.93	3	15-321-4421	97
ELBOW, PIPE, GLASS, BOROSILICATE, PYREX 7740 OR KIMAX KG-33, 1/2 IN. ID, 90 DEG, TEMPERED		EA	3.57	3	15-322-1021	97
ELBOW, PIPE, GLASS, BOROSILICATE TYPE, PYREX 7740 OR KIMAX KG-33, TEMPERED, STD WALL, CONICAL FLANGED ENDS						
DEG	ID IN.	CODE NO.				
90	1	72-8320	EA	9.11	23	15-322-2271 97
90	2	72-8340	EA	13.39	2	15-322-2291 97
90	3	72-6040	EA	20.86	2	15-322-2301 97
90	6	72-1950	EA	65.25	2	15-322-2321 97
FLANGE, CAST IRON, ADAPTED ASME 125 LB FLANGE, REAMED TO ACCEPT STD INSERTS, NO. 688-002, FISCHER AND PORTER						
SIZE IN.						
1		EA	2.48	2	15-322-5100	97
2		EA	4.76	2	15-322-5120	97
FLANGE, CAST IRON, LESS INSERTS, BOLTS AND NUTS, STYLE 2, FOR STD WALL CONICAL FLANGED ENDS, BOROSILICATE GLASS PIPE						
PIPE ID IN.		CODE NO.				
1		72-9652	EA	.81	23	15-322-6101 97
1 1/2		72-9653	EA	1.50	23	15-322-6121 97
2		72-9654	EA	1.99	23	15-322-6141 97
3		72-9655	EA	3.34	23	15-322-6161 97
FLANGE, CAST IRON, SET INCLUDES 2 FLANGES, 2 INSERTS, 8 NUTS AND BOLTS, STYLE 2, 4 IN. ID PIPE, FOR STD WALL CONICAL FLANGED ENDS, BOROSILICATE GLASS PIPE CODE NO. 72-0539		SET	20.72	123	15-322-6181	97
FLANGE, GLASS TO GLASS, ALUMINUM, BOROSILICATE GLASS, WITH INSERT, BOLT AND NUTS, FOR GLASS TUBING, STYLE 1, 4 IN. ID, 6 BOLT HOLES, CODE NO. 72-0538		SET	16.64	2	15-322-6341	97
FLANGE, CAST IRON, SET INCLUDES 2 FLANGES, 2 INSERTS, 8 NUTS AND BOLTS, STYLE 2, 6 IN. ID PIPE, BOROSILICATE GLASS PIPE, CODE NO. 72-0739		SET	39.31	23	15-322-6421	97
FLANGE, CAST IRON, FOR BOROSILICATE GLASS PIPE						
ID SIZE IN.						
3/8		EA	.70	3	15-322-6501	97
1/2		EA	.70	3	15-322-6511	97
3/4		EA	.57	3	15-322-6516	97
FLANGE, PIPE, TYPE 316 SS, BLIND, DRILLED HOLES, MACHINED EDGES, 1/8 IN. THK, 3 BOLT HOLES, 3/8 IN. BOLT HOLE DIA, FOR STD WALL AND CONICAL FLANGED ENDS BOROSILICATE GLASS PIPE						
BOLT CIRCLE	FOR PIPE	FLANGE				
DIA IN.	SIZE IN.	OD IN.				
2 3/4	1	3 3/4	EA	12.50	2	15-322-6821 97
3 3/8	1 1/2	4 3/8	EA	12.50	2	15-322-6841 97
FLANGE, PIPE, TYPE 316 SS, BLIND, DRILLED HOLES, MACHINED EDGES, 1/4 IN. THK, FOR STD WALL AND CONICAL FLANGED ENDS BOROSILICATE GLASS PIPE						
BOLT CIRCLE	BOLT HOLE	FLANGE				
DIA IN.	HOLES DIA IN.	OD IN. SIZE IN.				
3 7/8	3	4 7/8 2	EA	22.17	2	15-322-6861 97
5 1/4	6	6 1/4 3	EA	6.45	2	15-322-6881 97
GASKET, RUFF ASBESTOS FIBER, FOR BOROSILICATE GLASS PIPE, STYLE 1						
PIPE SIZE IN.		CODE NO.				
1 1/2		72-9129	EA	.17	3	15-324-1007 97
2		72-9130	EA	.55	3	15-324-1009 97
3		72-9131	EA	.40	3	15-324-1011 97

Attachment B

TUBE FITTINGS, FOR BOROSILICATE GLASS PIPE				UNIT	PRICE	STK PT	CATALOG NO	BUYER
GASKET, CHEMISEAL, TEFLON ENVELOPE WITH 1/16 IN. NEOPRENE FILLER, FOR USE WITH CORNING TYPE CONICAL FLANGE ON PYREX GLASS PIPE								
PIPE SIZE IN. OD	NO. HOLES	BOLT CIRCLE DIA IN.	CORNING STYLE NO.					
1	3	2 3/4	1	EA	.87	2	15-324-1017	97
			CODE NO. 72-9138					
1 1/2	3	3 1/2	--	EA	1.07	2	15-324-1019	97
			CODE NO. 72-9139					
GASKET, INTERFACE, 3/8 IN., FISCHER AND PORTER CO. FOR PYREX PIPE				EA	1.00	3	15-324-1040	97
GASKET, FLANGE, BOROSILICATE GLASS, INTERFACE, TRI-ANGULAR SHAPE, 1/2 ID IN., FISCHER AND PORTER				EA	1.00	3	15-324-1302	97
GASKET, PIPE ADAPTOR, KOROSEAL, FOR BOROSILICATE GLASS PIPE, 1/8 IN. THK, STYLE 2								
ID IN.	NO. HOLES		CODE NO.					
1	4		72-9163	EA	.90	2	15-324-1402	97
1 1/2	4		72-9164	EA	1.06	2	15-324-1412	97
2	4		72-9165	EA	.45	2	15-324-1422	97
3	4		72-9166	EA	2.00	2	15-324-1432	97
4	8		72-9167	EA	4.63	2	15-324-1442	97
GASKET, PIPE, STD, KOROSEAL, FOR BOROSILICATE GLASS PIPE, 1/8 IN. THK, STYLE 1				EA	.60	2	15-324-1602	97
ID IN.	NO. HOLES		CODE NO.					
1	3		72-9143					
GASKET, TEFLON, TYPE T, WITH SELF-CENTERING CLIPS AND RIDGES, MAX WORKING TEMP 45 DEG F, FOR USE WITH CONICAL END BOROSILICATE GLASS PIPE, WILL PROCESS EQUIPMENT CO, STYLE 1								
SIZE IN.	CODE NO.							
1	72-9254			EA	1.00	2	15-324-2102	97
1 1/2	72-9255			EA	.99	2	15-324-2103	97
2	72-9256			EA	.97	2	15-324-2104	97
3	72-9257			EA	2.40	2	15-324-2106	97
4	72-9808			EA	3.55	2	15-324-2108	97
6	72-9809			EA	6.46	2	15-324-2110	97
INSERT, FLANGE, ASBESTOS, MOLDED, RESIN BONDED, ONE PC CONSTRUCTION, FOR STD WALL BOROSILICATE GLASS TUBING (PIPE), CORNING								
ID IN.	CODE NO.	NUMBER						
1	72-9056	729056		EA	.50	23	15-324-3102	97
1 1/2	72-9057	730057		EA	.78	23	15-324-3112	97
2	72-9058	729058		EA	.91	23	15-324-3122	97
3	72-9059	729059		EA	1.12	23	15-324-3132	97
INSERT, FLANGE, ASBESTOS, 2-PC, FOR STD WALL BOROSILICATE GLASS TUBING, NO. P-22, CORNING								
ID IN.	CODE NO.							
4	72-9817			EA	1.33	2	15-324-3142	97
6	72-9821			EA	1.45	3	15-324-3152	97
INSERT, FLANGE, BOROSILICATE GLASS, STD, FISCHER AND PORTER								
ID IN.								
1/2				EA	.13	3	15-324-3312	97
3/4				EA	.13	3	15-324-3322	97
INSERT, FLANGE, TEFLON, FOR STD WALL BOROSILICATE GLASS PIPE								
ID IN.								
2				EA	8.00	2	15-324-3522	97
3				EA	9.95	2	15-324-3532	97
JOINT, SPHERICAL, STAINLESS STEEL, S/T JCINT 18/9, THREAD 1/4 IN., 0.540 IN. OD, NO. 7658, ACE								
FEMALE				EA	14.42	3	15-324-4420	36
MALE				EA	12.33	3	15-324-4425	36
REDUCER, BOROSILICATE GLASS, PIPE SIZE 1 1/2 X 1/2 IN., NO. 670-109, FISCHER AND PORTER				EA	14.70	3	15-324-5002	97
REDUCER, BOROSILICATE GLASS PIPE, TEMPERED, STD WALL, CONICAL FLANGED ENDS, PYREX 7740 OR KIPAX KG-33								
ID IN.	LGTH IN.		CODE NO.					
1 1/2 X 1	4		72-0050	EA	8.01	3	15-324-5202	97
2 X 1	4		72-0060	EA	10.73	2	15-324-5212	97
3 X 1	5		72-0070	EA	16.35	3	15-324-5232	97
3 X 1 1/2	5		72-0090	EA	16.35	3	15-324-5242	97
3 X 2	5		72-0100	EA	23.10	3	15-324-5252	97
4 X 1	7		72-0760	EA	23.73	3	15-324-5262	97
4 X 3	7		72-0360	EA	23.73	3	15-324-5292	97
6 X 1	9		72-2170	EA	34.91	2	15-324-5302	97
TEE, BOROSILICATE GLASS, 90 DEG, 1/2 IN. ID, FISCHER AND PORTER				EA	5.32	3	15-324-7112	97

Attachment B

<u>TUBE FITTINGS, FOR BOROSILICATE GLASS PIPE</u>		UNIT	PRICE	STK PT	CATALOG NO	BUYER
TEE, BOROSILICATE GLASS, DOUBLE TOUGH, TEMPERED, STD WALL, CONICAL FLANGED ENDS, CORNING						
10 IN.	CODE NO.					
1	72-8230	EA	8.83	2	15-324-7302	97
2	72-8250	EA	23.10	2	15-324-7322	97
3	72-6050	EA	34.50	2	15-324-7332	97
TEE, REDUCING, BOROSILICATE GLASS PIPE, TEMPERED, STD WALL, CONICAL FLANGED ENDS, PYREX 7740 OR KIMAX KG-33						
10 IN.	CODE NO.					
2 X 2 X 1	72-4748	EA	16.97	2	15-324-7542	97
<u>TUBE FITTINGS - PLASTIC</u>						
JOINT, BALL, POLYETHYLENE, SIZE 12/3, NO. 1322, LAB-LINE						
		EA	.70	3	15-325-2020	92
JOINT, SOCKET, POLYETHYLENE, SIZE 12/3, NO. 1324, LAB-LINE						
		EA	.65	3	15-325-2120	92
<u>TUBE FITTINGS, FOR QUARTZ PIPE</u>						
JOINT, GROUND, BALL AND SOCKET, BALL ONLY, FUSED, TRANSPARENT, UCC SPEC Y-MS-121						
SIZE						
18/9		EA	3.03	23	15-327-2100	97
28/15		EA	4.36	3	15-327-2120	97
35/25		EA	6.91	23	15-327-2140	97
JOINT, GROUND, BALL AND SOCKET, SOCKET ONLY, FUSED, TRANSPARENT, UCC SPEC Y-MS-121						
SIZE						
18/9		EA	3.15	3	15-327-2600	97
28/15		EA	4.73	3	15-327-2620	97
35/25		EA	7.51	3	15-327-2640	97
JOINT, GROUND, STD TAPER, CLEAR FUSED QUARTZ, GE						
INNER PART						
QT NO.						
10/30		EA	4.10	3	15-327-2800	97
12/30		EA	4.29	3	15-327-2820	97
14/35		EA	4.95	3	15-327-2840	97
40/50		EA	9.35	3	15-327-2860	97
45/50		EA	11.20	3	15-327-2880	97
55/50		EA	11.92	3	15-327-2900	97
60/50		EA	14.49	3	15-327-2920	97
71/60		EA	15.59	3	15-327-2940	97
OUTER PART						
QT NO.						
10/30		EA	4.18	3	15-327-3000	97
12/30		EA	4.36	3	15-327-3020	97
14/35		EA	4.15	3	15-327-3040	97
40/50		EA	10.42	3	15-327-3060	97
45/50		EA	8.50	3	15-327-3080	97
55/50		EA	13.22	3	15-327-3100	97
60/50		EA	12.00	3	15-327-3120	97
71/60		EA	29.00	3	15-327-3140	97
JOINT, GROUND, STD TAPER, FULL LGTH, FUSED, TRANSPARENT, UCC SPEC Y-MS-121						
TYPE	S/T NO.					
FEMALE	19/38	EA	5.15	3	15-327-4100	97
FEMALE	24/40	EA	5.67	3	15-327-4120	97
FEMALE	29/42	EA	5.89	23	15-327-4140	97
FEMALE	34/45	EA	5.90	3	15-327-4160	97
FEMALE	50/50	EA	12.07	23	15-327-4180	97
MALE	19/38	EA	4.99	3	15-327-4200	97
MALE	24/40	EA	5.15	3	15-327-4220	97
MALE	29/42	EA	5.74	23	15-327-4240	97
MALE	34/45	EA	7.26	3	15-327-4250	97
MALE	50/50	EA	9.25	3	15-327-4260	97
JOINT, SEMI-BALL, FUSED, TRANSPARENT, SEMI-BALL NO. 12/5, BALL DIA 12 MM, TUBE ID 5 MM, LGTH 6 IN., AMERSIL CO, UCC SPEC Y-MS-121						
TYPE						
INNER BALL		EA	3.11	3	15-327-6100	97
OUTER SOCKET		EA	4.35	3	15-327-6110	97
JOINT, STD BALL AND SOCKET, CLEAR FUSED QUARTZ, GE						
BALL QB NO.						
50/30		EA	15.59	3	15-328-1000	97
65/40		EA	21.00	3	15-328-1020	97
102/75		EA	38.80	3	15-328-1070	97
SOCKET QB NO.						
50/30		EA	15.00	3	15-328-1100	97
65/40		EA	25.50	3	15-328-1120	97

Attachment B

<u>TUBE FITTINGS, FOR QUARTZ PIPE</u>		UNIT	PRICE	STK PT	CATALOG NO	BUYER
JOINT, STD BALL AND SOCKET, CLEAR FUSED QUARTZ, GE		-CONTINUED-				
SOCKET QB NO.		-CONTINUED-				
102/75 *****		EA	64.00	3	15-328-1170	97
TUBULATION, BOROSILICATE GLASS, FOR HEAVY WALL FILTERING FLASK NO. 5341, CORNING PYREX		EA	.29	3	15-331-1200	36
UNOPETTE, RBC DILUTING SYSTEM, PARENTERAL SOLUTION FOR 200 TO 1 DILUTION, CONTAINER OF 100 TESTS 10 MICROLITER PIPETTE, B + D 5802		CONT	6.75	2	15-333-1500	36
UNOPETTE, WBC DILUTING SYSTEM, DETERGENT SOLUTION FOR 100 TO 1 DILUTION, CONTAINER OF 100 TESTS MICRO- LITER PIPETTE AND 50 DILUENT VIALS, B + D 5805		CONT	8.29	2	15-333-1520	36
UNOPETTE PIPETTE, 100 PER PKG, B AND D CAP. LAMBDA	NO.					
	3	PKG	13.07	2	15-333-1600	36
	10	PKG	8.50	2	15-333-1620	36
VALVE, CHECK, GROUND FLOAT AND SEAT, HOLLOW BALL, PYREX GLASS, STYLE B, FOR VERTICAL USE, GROUND FLOAT MUST BE COMPLETELY ROUND WITH NO TAILS, NO. JV8850, SGA		EA	6.78	3	15-336-4500	36
VALVE, NEEDLE, TEFLON AND GLASS, LESS GLASS CONN TUBES, EMIL GRENIER G10428, MANOSTAT 78-425-01 OR CMS 237-271		EA	6.66	3	15-336-6000	36
VALVE, ULTRAMAX, TEFLON, USED CN LABORATORY GLASS- WARE, SCIENTIFIC GLASS APPARATUS CO						
PART	PT NO.					
KNOB, HEXAGONAL, NYLON	B-8182	EA	.30	3	15-336-6210	36
O-RING, COMPRESSION	B-8190	EA	.24	3	15-336-6230	36
PLUG, TURNING, TEFLON	B-8186	EA	1.00	3	15-336-6240	36
WASHER, TEFLON	B-8188	EA	.25	3	15-336-6250	36
VIAL, CELLULOSE ACETATE, 5 ML CAP., 2 TO 2 1/2 IN. HIGH BY 1/2 IN. DIA., (25 MG/CM TO THE SECOND POWER WALL) WITH GASKETED NICKEL PLATED STEEL CAP, E-52, TRACERLAB		EA	.40	3	15-336-6800	36
WASHER, CAGE AND RACK, AUTOMATIC, STEAM HEATED, MODEL NO. 6000, BETTER BUILT MACHINERY CORP						
PART	PT NO.					
ARM, SPRAY, STAINLESS STEEL, FOR HUB OF ROTARY HEADERS	CLR-1F	EA	72.50	2	15-337-1500	35
AXLE, STAINLESS STEEL, FOR HUB OF ROTARY HEADERS	CLR-1H	EA	15.00	2	15-337-1505	35
BUSHING, BEARING	CLR-1EE	EA	4.50	2	15-337-1515	35
COIL, 1 IN., SOLENOID VALVE	CLB-4A	EA	8.50	2	15-337-1525	35
CYLINDER, AIR, 2 IN.	CLB-98	EA	95.00	2	15-337-1530	35
DIVERTER, TIMER, ADJUSTABLE	CLA-41	EA	35.00	2	15-337-1540	35
FILTER, AIR, FOR BELL-GOSSETT AIR COMPRESSOR, MODEL SYC-T-34-1AD		EA	3.50	2	15-337-1550	35
GLASS, VIEW-PORT	CLA-5	EA	14.50	2	15-337-1555	35
HUB, MACHINED CASTING, COMPLETE WITH INSERT PRESS FIT BEARING AND TWO STAINLESS STEEL SET SCREWS, FOR ALL ROTARY HEADERS		EA	90.00	2	15-337-1560	35
LOCK, BODY ASSY	CLA-37A	EA	48.76	2	15-337-1565	35
LUBRICATOR-FILTER, AIR LINE, 1/8 IN., NO. FL-125, BELLWIS CO				2	02-099-5180	
PLATE, CAPPING, STAINLESS STEEL, FOR HUB OF ROTARY HEAD		EA	6.25	2	15-337-1580	35
PLUG, SPRAY ARMS, ROTARY HEADERS	CLR-1G	EA	.60	2	15-337-1585	35
REGULATOR, TEMPERATURE, 3/4 IN., COMPLETE		EA	115.00	2	15-337-1590	35
REGULATOR, TEMPERATURE, COMPLETE, FOR USE WITH 100 GAL GENERATOR, NO. A1413T- 9R2, ASHCROFT, 2100 INDICATING TYPE, 2200 NON-INDICATING TYPE, RANGE - GOLD SPRING 130 TO 190 DEG F, OR 55 TO 85 DEG C, RANGE - CADMIUM SPRING 130 TO 220 DEG F, OR 55 TO 100 DEG C, 1 1/2 IN. BRONZE BODY, MANNING, MAXWELL AND MOORE		EA	140.00	2	15-337-1595	35

Attachment B

	UNIT	PRICE	STK	PT	CATALOG NO	BUYER
WASHER, RACK, STEAM STERILIZER, MODEL 21-63-170, TYPE DC, TYPE II, R G WRIGHT CO, INC PART PT NO. -CONTINUED-						
SWITCH, TOGGLE, SINGLE PHASE, 2 POLE, OPEN TYPE, NO. 600TOX5, ALLEN-BRADLEY --			2		05-108-1087	
SWITCH, TOGGLE, NO. 0111-0002, MCGILL --	EA	2.30	2		15-337-8195	35
TRANSFORMER, 300 KVA, TYPE SZO, NO. 48319, HEVI-DUTY ELECTRIC CO --			2		15-337-2576	
VALVE, TRANSFER, SWIVEL, NICKEL PLATE 21-8397	EA	230.95	2		15-337-8225	35
WATCH GLASS, ANNEALED, MEDIUM THICKNESS, CONCAVE, FINISHED EDGES, NO. 28141, WILL CORP DIA MM						
40 (MATHESON 64200-10)	EA	.02	1	3	15-338-1511	36
50 (MATHESON 64200-15)	EA	.00	3		15-338-1521	36
65 (MATHESON 64200-20)	EA	.00	3		15-338-1531	36
75 (MATHESON 64200-25)	EA	.05	23		15-338-1541	36
90 (MATHESON 64200-40)	EA	.02	1	3	15-338-1551	36
100 (MATHESON 64200-35)	EA	.00	1		15-338-1561	36
115 (MATHESON 64200-40)	EA	.00	3		15-338-1571	36
125 (MATHESON 64200-45)	EA	.00	3		15-338-1581	36
140 (MATHESON 64200-50)	EA	.00	3		15-338-1591	36
175 (MATHESON 64200-65)	EA	.00	2		15-338-1606	36
200 (MATHESON 64200-70)	EA	.00	23		15-338-1611	36
250 FISHER 2-610, SARGENT S-83605-X	EA	.00	23		15-338-1621	36
WATCH GLASS, COUNTERPOISED, 75 MM DIA, WILL CORP NO. 28161, MATHESON 3040-30, PREISER 10-1760/20	EA	.38	3		15-338-1801	36
WATCH GLASS, PLAIN, SOFT GLASS, FULLY ANNEALED, CONCAVE SHAPE, 0.984 IN. 0.005 IN. TO 0.010 IN. DIA, 0.047 IN. THK, COMMERCIAL VARIATIONS PER ORNL SKETCH A-7	EA	.03	3		15-338-1851	36
WATCH GLASS, PYREX GLASS, HEAVY WALL, UNIFORM FIRE POLISHED EDGE, NO. 9985, CORNING DIA MM						
65	EA	.14	23		15-338-1911	36
75	EA	.16	2		15-338-1921	36
90	EA	.22	3		15-338-1931	36
100	EA	.23	1	3	15-338-1941	36
WATCH GLASS, SPEEDYVAP WITH THREE RIBS MOLDDED INTO UNDER SIDE FOR LOW FORM BEAKER, NO. H-64220, HARSHAW DIA IN. BEAKER CAP. ML						
3 (VWR 66114-022)	EA	.17	23		15-338-2001	36
3 1/2 (MATHESON 64220-15)	EA	.00	123		15-338-2111	36
4 (VWR 66114-066)	EA	.13	123		15-338-2121	36
4 1/2 (MATHESON 64220-25)	EA	.00	23		15-338-2131	36
5 (MATHESON 64220-30)	EA	.00	3		15-338-2141	36
6 (MATHESON 64220-35)	EA	.00	1	3	15-338-2151	36
WATCH GLASS, TRANSPARENT VITREOSIL, 3 1/2 IN. DIA, THERMAL SYNDICATE LTD	EA	8.40	3		15-338-2401	97
WATCH GLASS, QUARTZ, FUSED, TRANSPARENT, 4 1/2 IN. DIA	EA	11.60	3		15-338-2411	97
WAX, SEALING, APIEZON TYPE Q, 2 LB CAN, JAMES G BIDDLE CO, NO. 14-638-20, FISHER	CAN	12.26	1235		15-338-2651	36
WAX, SEALING, APIEZON TYPE W, STK APPROX 7 IN. LGTH, JAMES G BIDDLE OR LAPINE 35376-29X	STK	.02	235		15-338-2661	36
WAX, UNIVERSAL RED, LIQUIFIES AT APPROX 65 DEG C, 2 OZ STICK, CENCO NO. 11450 OR FSCD 15-530	STK	.00	3		15-338-2671	36
WEIGHT SET, ANALYTICAL, N.B.S. CLASS S, 1 MG TO 100 GM, FACTORY TO FURNISH A COMPLIANCE STATEMENT THAT WEIGHTS MEET REQUIREMENTS FOR N.B.S. CLASS S WEIGHTS, NO. 4254-S, W M AINSWORTH AND SONS	SET	175.00	3		15-338-3001	36
WEIGHT, BALANCE, ANALYTICAL, NO. T-657, CHEMICAL RUBBER CO DENOMINATION MILLIGRAM						
20 OHAUS 51021	EA	.00	1		15-338-3061	36
200 OHAUS 51022	EA	.00	1		15-338-3091	36
500 OHAUS 51052	EA	.00	1		15-338-3101	36
WEIGHT, BALANCE, METRIC, BRASS, 1 GM TO 1000 GM PER SET, IN OPEN BLOCK, FOR HARVARD TRIP BALANCES, TORSION BALANCES, ETC, NO. 3420-60, MATHESON OR NO. 2-301, FISHER	SET	16.20	3		15-338-3291	36

CRITERIA CHECKLIST
SCIENTIFIC GLASSBLOWING FACILITY

SPACE

A gross floor area of about 500 square feet is a desirable planning allowance for a completely equipped glass shop for one glassblower. Two or more glassblowers, however, need only about 250 square feet per man. A floor plan with all equipment located is one of the best planning aids.

MACHINERY

1. Lathe, glassblowing (number and size determined by expected work - at least one for each two glassblowers)
2. Drill press, 1/2" pedestal, variable speed
3. Glass saw with pass-thru feature
4. Flat lap, rotating, variable speed
5. Belt grinder, vertical

EQUIPMENT

1. Oven, annealing, 1400°F
2. Sink, stainless steel with drainboard
3. Spot welder
4. Hand forming tools (general)
5. Bench burner
6. Hand torches (each workbench and lathe)
7. Glass cutter (plate and sheet)
8. Circle cutter (plate and sheet)
9. High vacuum system with a connector in oven
10. Water fountain, hot-cold
11. Personal safety glasses, neodymium and cobalt tints

FURNITURE

A. Each Station

1. Workbench, glassblowers, 10' formica top
2. Stool, draftsman, adjustable
3. Base cabinet, storage, with drawers and cupboard

B. General

1. Cabinets, storage
2. Benches, flattop utility
3. Racks, glass stock storage with separators for sizes

UTILITIES

A. At each lathe and workbench

1. Compressed air
2. Natural or LP gas
3. Oxygen
4. Hydrogen
5. House vacuum
6. Electrical outlets

B. General

1. Water
2. Distilled water

HEATING, VENTILATION, AIR CONDITIONING

Adequate heat exhaust through ceiling hoods over each lathe, workbench, and oven is important. A fume hood or exhaust is required for chemical work at the sink. The high air volume requirements need consideration in sizing proper heating and cooling equipment, and also in distributing flow well to prevent drafts. Heat from the work aids in heating the shop, yet adds considerable load for air conditioning. Work station spot-cooling air distribution can aid in an economic compromise for worker comfort.

LIGHTING

Illumination should be well distributed with 100 footcandles intensity at work stations other than the glassblowing benches where about 75 footcandles is adequate and will probably result from overhead hood shadow.

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