

UNITED STATES TRANSURANIUM AND URANIUM REGISTRIES  
ANALYTICAL PROCEDURE MANUAL

**USTUR 900: MANUFACTURERS AND DISTRIBUTORS OF USTUR EQUIPMENT AND SUPPLIES**

<b>Purpose</b>	To provide information on the manufacturers and distributors of laboratory equipment and supplies	<b>Method Number</b>	USTUR 900
<b>Original Date</b>	10/10/95	<b>Author</b>	USTUR Radiochemistry Staff
<b>Revision Number</b>	2	<b>Approved By</b>	Jim Elliston
<b>Effective Date</b>	10/1/99	<b>Approval Date</b>	1/31/01

**1. Tissue Preparation and Ashing**

1.1. Biohazard Hood

Nuaire Biological Safety Cabinet  
Model No. NU-425-600  
210 Fernbrook Lane  
Plymouth, MN 55447

1.2. Microbalance (10 mg - 101 g)

Mettler Model AB104  
Fisher Scientific (Cat. No. 01-913-5035)  
2170 Martin Avenue  
Santa Clara, CA 95050

1.3. Gross Balance (5 g - 5100 g)

Mettler Model PB5001  
Fisher Scientific (Cat. No. 01-913-502D)  
2170 Martin Avenue  
Santa Clara, CA 95050

1.4. Drying Oven

Sheldon Manufacturing  
Horizontal Air Flow Oven, Model 1685  
VWR (Cat. No. 52202-258)  
P.O. Box 3551  
Seattle, WA 98124

UNITED STATES TRANSURANIUM AND URANIUM REGISTRIES  
ANALYTICAL PROCEDURE MANUAL

1.5. Muffle Furnace

Lindberg Utility Box Furnace (Model 52641-P-AP2)  
304 Hart Street  
Watertown, WI 53094

1.6. Stirring Hot-Plate

Corning Model PC-320  
VWR Scientific (Cat. No. 33920-219)  
P.O. Box 3551  
Seattle, WA 98124

1.7. Hot-Plate

Corning Model PC-500  
VWR Scientific (Cat. No. 33920-161)  
P.O. Box 3551  
Seattle, WA 98124

1.8. Surface Thermometer (0° C - 525° C)

PTC Instruments Model 573F  
VWR Scientific (Cat. No. 61157-254)  
P.O. Box 3551  
Seattle, WA 98124

1.9. <sup>242</sup>Pu Tracer Solution

National Institute of Standards and Technology  
Standard Reference Materials Program  
Bldg. 202, Room 204  
Gaithersburg, MD 20999

1.10. <sup>243</sup>Am Tracer Solution

National Institute of Standards and Technology  
Standard Reference Materials Program  
Bldg. 202, Room 204  
Gaithersburg, MD 20999

1.11. <sup>232</sup>U Tracer Solution

National Institute of Standards and Technology  
Standard Reference Materials Program  
Bldg. 202, Room 204  
Gaithersburg, MD 20999

UNITED STATES TRANSURANIUM AND URANIUM REGISTRIES  
ANALYTICAL PROCEDURE MANUAL

1.12. <sup>229</sup>Th or Tracer Solution

National Institute of Standards and Technology  
Standard Reference Materials Program  
Bldg. 202, Room 204  
Gaithersburg, MD 20999

1.13 HF Repipet Jr. Dispenser

Fisher Scientific (Cat. No. 13-687-59B)  
2170 Martin Avenue  
Santa Clara, CA 95050

1.14. Membrane Filter for KF Fusion

Gelman Supor Filter  
VWR Scientific (Cat. # 28147-640)  
P.O. Box 3551  
Seattle, WA 98124

1.15. Potassium Fluoride

VWR Scientific (Cat. # JT3123-01)  
P.O. Box 3551  
Seattle, WA 98124

1.16. Bottles 8, 16, 21 oz.

(8 oz Cat. # IR229-0250)  
(16 oz Cat. # IR229-0500)  
(32 oz Cat. # IR229-1000)  
I-CHEM Certified 200 Series  
VWR Scientific  
P.O. Box 3551  
Seattle, WA 98124

**2. Anion Exchange**

2.1 Ion-Exchange Columns (for all extractions)

Econopak Columns (20 cm x 1.0 cm)  
Bio-Rad Laboratories (Cat. No. 737-1020)  
Chemical Division Sales Office  
2200 Wright Avenue  
Richmond, CA 94804

2.2 Automatic Micro-Pipettor

UNITED STATES TRANSURANIUM AND URANIUM REGISTRIES  
ANALYTICAL PROCEDURE MANUAL

200-1000 mL, Variable Oxford Benchmate  
Fisher Scientific (Cat. No. 21-229)  
2170 Martin Avenue  
Santa Clara, CA 95050

2.3. Automatic Macro-Pipettor

5 - 10 mL, Variable Oxford  
Fisher Scientific (Cat. No. 21-196)  
2170 Martin Avenue  
Santa Clara, CA 95050

2.4. Column Reservoirs

Econo-Column, 250 mL, Polypropylene  
Bio-Rad Laboratories (Cat. No. 731-0003)  
Chemical Division Sales Office  
2200 Wright Avenue  
Richmond, CA 94804

2.5. Column 2-Way Stopcocks

Econo-Column Fitting  
Bio-Rad Laboratories (Cat. No. 732-8102)  
Chemical Division Sales Office  
2200 Wright Avenue  
Richmond, CA 94804

2.6. Anion Exchange Resin for Pu and U

Bio-Rad (Anion Exchange) Ag 1-X4 Resin  
100-200 Mesh, Chloride Form  
Bio-Rad Laboratories (Cat. No. 140-1341)  
Chemical Division Sales Office  
2200 Wright Avenue  
Richmond, CA 94804

2.7. Anion Exchange Resin for Am

Bio-Rad MP-1 Resin  
100-200 Mesh, Chloride Form  
Bio-Rad Laboratories (Cat. No. 141-0841)  
Chemical Division Sales Office  
2200 Wright Avenue  
Richmond, CA 94804

2.8. N-Dodecane (99+%)

UNITED STATES TRANSURANIUM AND URANIUM REGISTRIES  
ANALYTICAL PROCEDURE MANUAL

Lancaster Synthesis Inc. (Cat. No. 4075)  
P.O. Box 1000  
Windham, NH 03087

2.9. DDCP (Dibutyl-N,N-diethylcarbamoyl phosphonate)

Lancaster Synthesis Inc. (Cat. No. 4480)  
P.O. Box 1000  
Windham, NH 03087

2.10. Eichrom Resin Columns

Actinide Resin (Cat. # AC-C50-A)  
TRU Resin (Cat. # TR-C50-A)  
Eichrom Industries  
8205 S. Cass Ave., Suite 11  
Darien, IL 60561

**3. Electrodeposition**

3.1. Stainless Steel Planchets

A.F. Murphy Die & Machine Co. Inc.  
430 Hancock Street  
N. Quincy, MA 02171-2400

3.2. Vanadium (99.5%)

Alldrich

UNITED STATES TRANSURANIUM AND URANIUM REGISTRIES  
ANALYTICAL PROCEDURE MANUAL

3.3. Cardboard Coin Holders

Grigsby Brothers  
817 NE Madrona  
Portland, OR  
(503) 285-8341  
Attention: Martin Reedy

3.4. D.C. Power Supply

Benchtop, 2-Output (0-30V, 0-1.5A) Supply  
Cole Parmer Instrument Co. (Cat. No. H-26540-20)  
7425 North Oak Park Avenue  
Niles, IL 60714-9930

3.5. pH Meter

Corning, Model 340  
Fisher Scientific (Cat. No. 13-641-299)  
2170 Martin Avenue  
Santa Clara, CA 95050

3.6. Microelectrode

Beckman, Model Future Plus Calomel  
Combination Electrode  
VWR (Cat. No. BK39536)  
P.O. Box 3551  
Seattle, WA 98124

3.7. Rubber Stamp (for Planchet Holders)

J&H Printing & Type Services  
223 E. Main Street  
Pullman, WA 99163  
(509) 332-0782

3.8. Electrodeposition Cells

3.8.1. Cell body

Nalgene Polypropylene Bottles  
Narrow-Mouth, 30 mL  
Fisher Scientific (Cat. No. 03-313-4A)  
2170 Martin Avenue  
Santa Clara, CA 95050

3.8.2. Stainless Steel Caps - Cathode

UNITED STATES TRANSURANIUM AND URANIUM REGISTRIES  
ANALYTICAL PROCEDURE MANUAL

WSU Technical Services - Instrument Shop  
Pullman, WA 99164-2801

3.8.3. Sealing Rings

Quad-ring  
Western Bearing  
810 S. Grand Ave.  
Pullman, WA 99163

3.8.4. Splatter Guard

Nalgene Polypropylene Funnel (35 mm)  
Fisher Scientific (Cat. No. 10-347C)  
2170 Martin Avenue  
Santa Clara, CA 95050

3.8.5. Platinum Wire-Anode (low purity Pt.)

Fisher Scientific (Cat. No. 13-766-4A)  
2170 Martin Avenue  
Santa Clara, CA 95050

3.8.6. 1 mm dia. Platinum Wire, 99.9985%

Alfa Aesar (Cat. No. 10956)  
30 Bond St.  
Ward Hill, MA 01835-8099  
Phone: 800-343-0660  
Fax: 800-322-4757

3.9. Gas Washing Bottle, 500 mL

PGC Scientific (Cat. No. 41-1920-54)  
P.O. Box 7277  
Gaithersburg, MD 20898-7277

#### 4. Alpha Spectrometry

##### 4.1. Spectrometer System

###### 4.1.1. Detectors

Ortec OCTEC Model OCTPC-U0450  
5 Units of 8 x 450 mm<sup>2</sup> ultra silicon surface barrier detectors  
(BU-017-450-100)  
EG&G Nuclear Instruments  
100 Midland Road  
Oak Ridge, TN 37830

###### 4.1.2. Vacuum Pump (Dual Stage Model #2MB)

EG&G Nuclear Instruments  
100 Midland Road  
Oak Ridge, TN 37830

##### 4.2. Data Acquisition System

###### 4.2.1. ALPHAVISION V4.01

EG&G Nuclear Instruments  
100 Midland Road  
Oak Ridge, TN 37830

###### 4.2.2. Maestro for Windows Version 5.00

EG&G Nuclear Instruments  
100 Midland Road  
Oak Ridge, TN 37830

##### 4.3. Alpha Radionuclide Sources

National Institute of Standards and Technology  
Standard Reference Materials Program  
Bldg. 202, Room 204  
Gaithersburg, MD 20999

#### 5. Others

##### 5.1. Radiacwash

VWR Scientific (Cat. No. 21876-302)  
P.O. Box 3551  
Seattle, WA 98124

UNITED STATES TRANSURANIUM AND URANIUM REGISTRIES  
ANALYTICAL PROCEDURE MANUAL

5.2. Centrifuge

Model 21K (115V, 50/60 Hz)  
Fisher Scientific (Cat. No. 04-977-21K)  
2170 Martin Avenue  
Santa Clara, CA 95050

5.3. Barnstead Millipore™ Water System

2555 Kerper Blvd.  
P.O. Box 797  
Dubuque, IA 52004-0797  
(800) 446-6060