Standard & Radionuclide Solutions

Standards Solutions 7000 Series

Accuracy: Each nuclide is NIST traceable, and many are DKD traceable. Please inquire with an Eckert & Ziegler Isotope Products customer service representative regarding specific nuclides. Contained activity values have a ±15% relative to the requested activity value. The uncertainty value of the measured activity value for a NIST-traceable calibration can theoretically be as low as ±3% at the 99% confidence level (k=2.58) but will be no greater than ±5% unless otherwise noted elsewhere in this publication. For DKD-accredited calibrations, the uncertainty value of the measured activity value is typically 3.0-3.5% at the 95% confidence limit (k=2) for certain nuclides in Eckert & Ziegler Isotope Products DKD Scope of Accreditation. Please inquire with an Eckert & Ziegler Isotope Products customer service representative regarding the specific measurement uncertainty limit for each nuclide.

Activity: Solutions are available in a variety of activities. Activity ranges for each nuclide are listed in the tables on pages 13–17.

Molarity: Different molarities are available upon request.

Carrier: Carrier materials will be added when considered appropriate or upon request.

Purity: Radionuclidic impurities are specified on the Certificate of Calibration. For applications that require specific radionuclidic purity requirements, please contact customer service. For many alpha emitting nuclides and transuranics, radionuclidic purity is not always possible due to short lived daughters, and it is typical for isotopic ratios to vary greatly from batch to batch.

Chemical purity is not determined by EZIP, and is not reported on the Certificate of Calibration. Please contact customer service for special requirements.

Packaging: Radionuclide solutions packaging is offered in a variety of vials and ampoules listed on page 12 of this catalog. Please specify activity, and fill volume. Fill volumes must be at least 50% of the capacity of the chosen vial. There may be an extra charge for some options. Customer supplied vials on all solution orders are not guaranteed by EZIP to be leak proof during shipment, and EZIP will not honor return or credit requests for leaking solutions in customer supplied vials. An extra charge for shielding high activity beta and gamma emitter solutions may apply. Please contact customer service for details.

Delivery: Most solutions are delivered within 10-14 days ARO. Expedited orders may be available upon request.

Radionuclidic Solutions 6000 Series

Accuracy: Each isotope has a nominal contained activity of ±15%.

Activity: Solutions are available in a variety of activities. Activity ranges for each nuclide are listed in the tables on pages 13–17.

Molarity: Different molarities are available upon request.

Carrier: Carrier materials will be added when considered appropriate or on request.

Purity: Radionuclidic impurities are specified on the Nominal Data Sheet. For applications that require specific radionuclidic purity, please contact customer service. For many alpha emitting nuclides and transuranics, radionuclidic purity is not always possible due to short lived daughters, and it is typical for isotopic ratios to vary greatly from batch to batch.

Chemical purity is not determined by EZIP, and is not reported on the Certificate of Calibration. Please contact customer service for special requirements.

Packaging: Radionuclide solutions packaging is offered in a variety of vials and ampoules listed on page 12 of this catalog. Please specify activity, and fill volume. Fill volumes must be at least 50% of the capacity of the chosen vial. There may be an extra charge for some options. Customer supplied vials on all solution orders are not guaranteed by EZIP to be leak proof during shipment, and EZIP will not honor return or credit requests for leaking solutions in customer supplied vials. An extra charge for shielding high activity beta and gamma emitter solutions may apply. Please contact customer service for details.

Delivery: Most solutions are delivered in 7 days ARO. Expedited orders may be available upon request.

Standard & Radionuclide Solutions

Ordering and Quotations

To place an order or receive a quotation for any standard or radionuclide solution please provide the following inwformation:

- Catalog Number
- Activity
- Configuration (include vial type and volume)
- Fill Volume

Orders and quotations may be faxed, phoned or e-mailed to customer service:

Phone: (661) 309-1010
Fax: (661) 257-8303
Email: sales@ezag.com

Container Configuration	Material	Volume	Dimensions Outer Diameter x Length
V-Vial	Glass	1 mL	0.55" x 1.93" (14 mm x 49 mm)
V-Vial	Glass	5 mL	0.83" x 1.93" (21 mm x 62 mm)
V-Vial	Glass	10 mL	1.0" x 2.9" (25 mm x 74 mm)
Serum Vial	Glass	10 mL	0.98" x 2.13" (25 mm x 54 mm)
Serum Vial	Glass	20 mL	1.18" x 2.24" (30 mm x 57 mm)
Flame Sealed Ampoule (FSA)	Glass	1 mL	0.41" x 2.64" (10.4 mm x 67 mm)
Flame Sealed Ampoule (FSA)	Glass	5 mL	0.65" x 3.31" (16.5 mm x 84 mm)
Flame Sealed Ampoule (FSA)	Glass	10 mL	0.75" x 4.21" (19 mm x 107 mm)
Flame Sealed Ampoule (FSA)	Glass	20 mL	0.89" x 5.12" (22.6 mm x 130 mm)
Flame Sealed Ampoule (FSA)	Glass	50 mL	1.12" x 7.0" (28.5 mm x 178 mm)
V-Vial	Polypropylene	2 mL	0.51" x 1.83" (12.7 mm x 46.5 mm)
V-Vial	Polypropylene	5 mL	0.80" x 2.34" (20.3 mm x 59.4 mm)
Plastic Bottle	Polypropylene	125 mL	2.0" x 4.0" (50.8 mm x 101.6 mm)
Plastic Bottle	Polypropylene	1000 mL	3.5" x 8.0" (88.9 mm x 203.2 mm)

All solutions are prepared to a tolerance of +/-15% of the requested activity. NIST traceable calibrated solution uncertainties are stated in the table.

Nuclide & Chemical Form	Catalog Number	Uncertainty (NIST) (99% Confidence Level)	Minimum Activity		Maximum Activiity	
Aluminum-26	On Request					
Americium-241	6241	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Americium chloride in 1 M HCL	7241	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Americium-243	6243	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Americium chloride in 1 M HCL	7243	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Antimony-124	6124	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Antimony chloride in 6 M HCl	7124	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Antimony-125	6225	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Antimony chloride in 6 M HCl	7225	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Barium-133	6133	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Barium chloride in 0.1M HCl	7133	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Beryllium-7	On Request					
Beryllium chloride in 0.5 M HCl	On Request					
Bismuth-207	6207	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Bismuth chloride in 1M HCl	7207	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Cadmium-109	6109	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Cadmium chloride in 0.1 M HCl	7109	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	500 µCi	18.5 MBq
Calcium-45	6045	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Calcium chloride in H_2O	7045	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Californium-252	6252	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Californium nitrate in 0.1 M HNO_3	7252	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 kBq	100 µCi	3.7 MBq
Carbon-14 (1)	6014	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Benzoic Acid-Carboxyl-C-14 in 0.1 M NaOH	7014	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Cerium-139	6139	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Cerium chloride in 0.5M HCl	7139	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Cerium-141	On Request					
Cesium-134 (2)	6134	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Cesium chloride in 0.1 M HCl	7134	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Cesium-137	6137	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Cesium chloride in 0.1 M HCl	7137	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Chlorine-36	6036	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Sodium chloride in H_2O	7036	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Chromium-51	6051	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Chromium chloride in 0.5 M HCl	7051	Calibrated Solution uncertainty +/-3–5%	500 nCi	18.5 kBq	500 µCi	18.5 MBq
Cobalt-56 (3)	6056	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Cobalt chloride in 0.1 M HCl	7056	Calibrated Solution uncertainty +/-3–5%	200 nCi	7.4 kBq	100 µCi	3.7 MBq
Cobalt-57	6057	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Cobalt chloride in 0.1 M HCl	7057	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Co-56 and Co-58 < 0.2%						

1) Cannot offer Na_2CO_3 or any other carbonic acid form.
2) May contain Ba-133 impurity.
3) Impurities may exceed 10%. This isotope is sold as-is. Please contact customer service if you have specific requirements.

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Nuclide & Chemical Form	Catalog Number	Uncertainty (NIST) (99% Confidence Level)	Minimum Activity		Maximum Activiity	
Cobalt-58	On Request					
Cobalt-60	6060	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Cobalt chloride in 0.1 M HCl	7060	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Curium-244	6244	Nominal Solution	1 nCi	37 Bq	100 µCi	3.7 MBq
Curium nitrate in 1 M HNO_3	7244	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	3.7 MBq
Europium-152	6152	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Europium chloride in 0.5 M HCl	7152	Calibrated Solution uncertainty +/-3–5%	500 nCi	18.5 kBq	100 µCi	3.7 MBq
Eu-154 < 2%						
Gd-153 impurity as high as 13%. Call customer service for specific information.						
Europium-154 (1)	6154	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Europium chloride in 0.5 M HCl	7154	Calibrated Solution uncertainty +/-3–5%	500 nCi	18.5 kBq	100 µCi	3.7 MBq
Europium-155 (1)	6155	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Europium chloride in 0.5M HCl	7155	Calibrated Solution uncertainty +/-3–5%	200 nCi	7.4 kBq	100 µCi	3.7 MBq
Gadolinium-148	On Request					
Gadolinium-153	6153	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Gadolinium chloride in 1 M HCl	7153	Calibrated Solution uncertainty +/-3–5%	200 nCi	7.4 kBq	100 µCi	3.7 MBq
Eu-154 < 2%						
Germanium-68 (2)	6068	Nominal Solution	1 nCi	37 Bq	5 mCi	85 MBq
Germanium chloride in 0.5 M HCl	7068	Calibrated Solution uncertainty +/-3–5%	1 µCi	37 kBq	100 µCi	3.7 MBq
Gold-195	On Request					
Gold-198	On Request					
Holmium-166m (1)	6166	Nominal Solution	1 nCi	37 Bq	100 µCi	3.7 MBq
Holmium chloride in 0.1 M HCl	7166	Calibrated Solution uncertainty +/-3–5%	200 nCi	7.4 kBq	100 µCi	3.7 MBq
Hydrogen-3	6003	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Hydrogen-3 as H_2O	7003	Calibrated Solution uncertainty +/-3–5%	500 nCi	18.5 kBq	100 µCi	3.7 MBq
Iodine-125	6125	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Sodium iodide in 0.1M NaOH	7125	Calibrated Solution uncertainty +/-3–5%	200 nCi	7.4 kBq	100 µCi	3.7 MBq
Iodine-129	6129	Nominal Solution	1 nCi	37 Bq	10 µCi	370 kBq
Sodium iodide in 0.1 M NaOH	7129	Calibrated Solution uncertainty +/-3–5%	1 µCi	37 kBq	10 µCi	370 kBq
Iodine-131	6131	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Sodium iodide in 0.1 M NaOH	7131	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Iridium-192	6192	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Iridium chloride in 0.1 M HCl or	7192	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Hexachloroiridate in H_2O						
Iron-55	6055	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Ferric chloride in 1 M HCl	7055	Calibrated Solution uncertainty +/-6.0%	20 µCi	740 kBq	100 µCi	3.7 MBq

1) This isotope is sold as-is. Please contact customer service if you have specific impurity requirements.
2) In equilibrium with daughter Ga-68.

All solutions are prepared to a tolerance of +/-15% of the requested activity. NIST traceable calibrated solution uncertainties are stated in the table.

Nuclide & Chemical Form	Catalog Number	Uncertainty (NIST) (99% Confidence Level)	Minimum Activity		Maximum Activiity	
Iron-59	6059	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Ferric chloride in 0.5 M HCl	7059	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Lead-210	6210	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Lead nitrate in 1M HNO_3 (1)	7210	Calibrated Solution uncertainty +/-7.1%	200 nCi	7.4 kBq	100 µCi	3.7 MBq
Manganese-54	6054	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Manganese chloride in 0.5 M HCl	7054	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Mercury-203	6203	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Mercury chloride in 1 M HCl	7203	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Neptunium-237	6237	Nominal Solution	1 nCi	37 Bq	100 µCi	3.7 MBq
Neptunium nitrate in 4 M HNO_3	7237	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	3.7 MBq
Nickel-63	6063	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Nickel chloride in 0.1 M HCl	7063	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Niobium-95	6195	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Niobium chloride in 6 M HCl	7195	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Phosphorus-32	6032	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Phosphoric acid in 0.02 M HCl	7032	Calibrated Solution uncertainty +/-3–5%	1 µCi	37 kBq	100 µCi	3.7 MBq
Plutonium-238	6238	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Plutonium nitrate in 4 M HNO_3	7238	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	3.7 MBq
Plutonium-239	6239	Nominal Solution	1 nCi	37 Bq	100 µCi	3.7 MBq
Plutonium nitrate in 4 M HNO_3	7239	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	3.7 MBq
Plutonium-240	6240	Nominal Solution	1 nCi	37 Bq	100 µCi	3.7 MBq
Plutonium nitrate in 4 M HNO_3	7240	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	3.7 MBq
Plutonium-241	6341	Nominal Solution	1 nCi	37 Bq	100 µCi	3.7 MBq
Plutonium nitrate in 4 M HNO_3	7341	Calibrated Solution uncertainty +/-3.5–5%	10 nCi	370 Bq	100 µCi	3.7 MBq
Plutonium-242	6242	Nominal Solution	1 nCi	37 Bq	100 µCi	3.7 MBq
Plutonium nitrate in 4 M HNO_3	7242	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	3.7 MBq
Purity specifications available upon request						
Polonium-208	On Request					
Polonium-209	6209	Nominal Solution uncertainty +/-3.0%	1 nCi	37 Bq	100 nCi	3.7 kBq
Polonium nitrate in 1M HNO_3	7209	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 nCi	3.7 kBq
Polonium-210	6310	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Polonium chloride in 2 M HCl	7310	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	3.7 MBq
Promethium-147	6147	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Promethium chloride in 0.5 M HCl	7147	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Radium-226	6226	Nominal Solution	1 nCi	37 Bq	100 µCi	370 kBq
Radium nitrate in 1 M HNO_3	7226	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	370 kBq
Radium-228	On Request					

To place an order or receive a quotation for any standard or radionuclide solution please provide the following information: **Catalog Number**, **Activity**, **Configuration** (include vial type and volume), and **Fill Volume**.

Customer Service—Orders and quotations may be faxed, phoned, or e-mailed:
Phone: (661) 309-1010 Fax: (661) 257-8303
Email: sales@ezag.com

1) In equilibrium with daughter Bi-210.

Standard & Radionuclide Solutions

All solutions are prepared to a tolerance of +/-15% of the requested activity. NIST traceable calibrated solution uncertainties are stated in the table.

Nuclide & Chemical Form	Catalog Number	Uncertainty (NIST) (99% Confidence Level)	Minimum Activity		Maximum Activiity	
Rhenium-186	On Request					
Rhenium-188	On Request					
Ruthenium-103	6103	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Ruthenium chloride in 4 M HCl	7103	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Ruthenium-106	6106	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Ruthenium chloride in 6 M HCl	7106	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Samarium-151	On Request					
Scandium-46	6046	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Scandium chloride in 0.5M HCl	7046	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Selenium-75	6075	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Selenious acid in 0.1 M HCl	7075	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Silicon-32 (1)	6132	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Sodium silicate in 0.1M NaOH	7132	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Silver-110m	6110	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Silver nitrate in 0.1 M HNO_3	7110	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Sodium-22	6022	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Sodium chloride in H_2O	7022	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Strontium-85	6085	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Strontium chloride in 0.5 M HCl	7085	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Strontium-89	On Request					
Strontium-90 (2)	6090	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Strontium chloride in 0.1 M HCl	7090	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Sulfur-35	6035	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Sodium Sulfate in H_2O	7035	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Tantalum-182 (3)	6182	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Tantalum nitrate in 4 M HNO_3 + 0.2M HF	7182	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Technetium-95m	On Request					
Technetium-99 (4)	6099	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Ammonium pertechnetate in H_2O	7099	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Tellurium-123m	6123	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Tellurous acid in 4 M HCl	7123	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Thallium-204	6204	Nominal Solution	1 nCi	37 Bq	5 mCi	185 MBq
Thallium chloride in 1 M HCl	7204	Calibrated Solution uncertainty +/-3–5%	100 nCi	3.7 kBq	100 µCi	3.7 MBq
Thorium-228	6228	Nominal Solution	1 nCi	37 Bq	100 µCi	3.7 MBq
Thorium nitrate in $ThCl_4$ in 1M HCl	7228	Calibrated Solution uncertainty +/-3–5%	10 nCi	370 Bq	100 µCi	3.7 MBq

1) In equilibrium with daughter P-32. Packaged in polypropylene vial.
2) In equilibrium with Y-90.
3) Packaged in polypropylene vial.
4) 0.65 mCi/mL solubility limit.