



RADIOCHEMISTRY TEST METHODS

SOLID METHODS

Radiochemistry	Method	Technique
Gross Alpha & Beta Radioactivity	EPA 9310, EPA 900.0M	Gas Flow Proportional Counting
Full Gamma Spectroscopy	EPA 901.1M, HASL 300 Ga01, DOE 4.5.2.3	Gamma Spectroscopy
Gamma Spec NORM	EPA 901.1M, HASL 300 Ga01, DOE 4.5.2.3	Gamma Spectroscopy
Radium-226/Radium-228	HASL 300 Ga01, DOE 4.5.2.3	Gamma Spectroscopy
Radioactive Strontium (89/90)	EPA 905.0M, Eichrom Sr,	Gas Flow Proportional Counting
Tritium	EPA 906M	Liquid Scintillation
Total Uranium/Total Thorium (price for each)	6020	ICP-MS
Isotopic Uranium (U-234, U-235, U-238)	HASL 300, ASTM D3972	Alpha Spectroscopy
Isotopic Thorium (Th-228, Th-230, Th-232)	HASL 300, LANL ER 200 M	Alpha Spectroscopy
Americium-241	EPA 907M, HASL 300	Alpha Spectroscopy
Carbon-14	EPA EERF C01, Pace® SOP	Liquid Scintillation
Nickel-63	DOE RESL Ni-1 M, Eichrom/Pace® SOP	Liquid Scintillation
Lead-210 (Low Level)	Eichrom Pb, HASL 300	Gas Flow Proportional Counting
Polonium-210	HASL 300	Alpha Spectroscopy
Isotopic Plutonium (Pu-238, Pu-239/Pu-240, Pu-242)	EPA 907, HASL 300	Alpha Spectroscopy
Plutonium-241	HASL 300	Liquid Scintillation
Technetium-99	HASL 300 TC-02, Eichrom Tc	Liquid Scintillation
Isotopic Curium	HASL 300, EPA 907	Alpha Spectroscopy
Iodine-129	Pace® SOP	Gamma Spectroscopy
Nickel-63	Pace® SOP	Liquid Scintillation
Iron-55	Pace® SOP	Liquid Scintillation
Neptunium-237	Pace® SOP	Alpha Spectroscopy

WATER METHODS

Radiochemistry	Method	Technique
Gross Alpha & Beta Radioactivity	EPA 900, EPA 9310	Gas Flow Proportional Counting
Gross Alpha (High Solids)	SM 7110C	Gas Flow Proportional Counting
Total Alpha Radium	EPA 903.0, SM 7500 RaB, EPA 9315	Gas Flow Proportional Counting
Radium-226	SM 7500 RaB M	Alpha Spectroscopy
Radium-226	EPA 903.0	Gas Flow Proportional Counting
Radium-226	EPA 903.1	Radon Emanation
Radium-228	EPA 904, EPA 9320	Gas Flow Proportional Counting
Full Gamma Spectroscopy (Photon Emitters)	EPA 901.1M, HASL 300 Ga01, DOE 4.5.2.3	Gamma Spectroscopy
Gamma Spec NORM	EPA 901.1M, HASL 300 Ga01, DOE 4.5.2.3	Gamma Spectroscopy
Radioactive Strontium (89/90)	EPA 905, Eichrom Sr	Gas Flow Proportional Counting
Tritium	EPA 906	Liquid Scintillation
Total Uranium	ASTM D5174	KPA
Total Uranium/Total Thorium (price for each)	6020	ICP-MS
Radon	SM 7500 Rn	Liquid Scintillation
Isotopic Uranium (U-234, U-235, U-238)	HASL 300, ASTM D3972	Alpha Spectroscopy
Isotopic Thorium (Th-228, Th-230, Th-232)	HASL 300, LANL ER 200 M	Alpha Spectroscopy
Americium-241	HASL 300, EPA 907M	Alpha Spectroscopy
Carbon-14	EPA EERF C01, Pace® SOP	Liquid Scintillation
Nickel-63	DOE RESL Ni-1 M, Eichrom/Pace® SOP	Liquid Scintillation
Lead-210	Eichrom Pb, ASTM D7535	Gas Flow Proportional Counting
Polonium-210	ASTM D7535	Alpha Spectroscopy
Isotopic Plutonium (Pu-238, Pu-239/Pu-240, Pu-242)	EPA 907, HASL 300	Alpha Spectroscopy

WATER METHODS, cont.

Plutonium-241	HASL 300	Liquid Scintillation
Technetium-99	HASL 300 TC-02, Eichrom Tc	Liquid Scintillation
Isotopic Curium	EPA 907, HASL 300	Alpha Spectroscopy
Iodine-129	Pace® SOP	Gamma Spectroscopy
Nickel-63	Pace® SOP	Liquid Scintillation
Iron-55	Pace® SOP	Liquid Scintillation
Neptunium-237	Pace® SOP	Alpha Spectroscopy
Strontium - 89/90	EPA 905	

PACE® GAMMA EMITTING ISOTOPES

Others may be available upon request

Actinium-227	Lanthanum-140
Actinium-228	Lead-210
Americium-241	Lead-212
Antimony-125	Lead-214
Barium-133	Manganese-54
Beryllium-7	Potassium-40
Bismuth-212	Protactinium-231
Bismuth-214	Protactinium-234M
Cadmium-109	Radium-223
Cerium-141	Radium-224
Cerium-144	Radium-226
Cesium-134	Radium-226S
Cesium-137	Ruthenium-103
Chromium-51	Silver-108M
Cobalt-57	Silver-110M
Cobalt-60	Thorium-227
Europium-152	ThoriumA68:A107-234
Europium-154	Tin-113
Europium-155	Uranium-235
Iodine-131	Yttrium-88
Iron-59	Zinc-65
	Zirconium-95

HUMAN FLUIDS

Radiochemistry	Method
Total Alpha Radium	SM 7500 Ra B
Radium-226	SM 7500 Ra B M
Radium-228	EPA 904
Isotopic Thorium	LANL ER 200 M
Tritium	EPA 906
Total Uranium	ASTM D5174 M
Isotopic Uranium	ASTM D3972M