

Table VII

Canadian Radioactive Minerals

Name	Composition	Per cent U ₃ O ₈ ¹	Per cent ThO ₂ ¹
Allanite.....	Complex silicate of rare earths, iron, aluminum and calcium	to 0.2	to 3.5
Meta-allanite ²	Apparently a hydrated variety		
Autunite (S).....	Hydrated phosphate of calcium and uranium	57	—
Bastnaesite.....	Fluo-carbonate of the cerium group of rare earths	trace	to 0.4
Becquerelite (S).....	Hydrated oxide of uranium	89	—
Betafite.....	Oxide of, essentially, niobium, tantalum, titanium, uranium and calcium	18 to 27	to 1.3
Ellsworthite.....	Higher, generally, in calcium		
Hatchettolite.....	Higher, generally, in calcium and tantalum		
Beta-uranophane (S).....	Hydrated silicate of calcium and uranium	66	—
Beta-uranotile.....	Synonym of beta-uranophane		
Brannerite ³	Oxide of uranium and titanium	34 to 52	to 6
Britholite.....	Complex silicate and phosphate of rare earths and calcium	—	to 3
Calcosamaraskite (see Samarskite).....			
Carnotite ⁴ (S).....	Hydrated vanadate of potassium and uranium	62	—
Cerianite (see Uraninite-thorianite-cerianite series).....			
Coffinite ⁴	Hydrated silicate of uranium	48 to 71 (on concentrates)	—
Columbite-tantalite.....	Oxide of niobium, tantalum, iron and manganese	to 0.5	trace
Toddite.....	High in uranium	11	0.5
Cuprosklodowskite (S).....	Hydrated silicate of uranium and copper	64	—
Curite (S).....	Hydrated oxide of lead and uranium	74	—
Cyrtolite (see Zircon).....			
Davidite ⁴	Titanate of iron, uranium and rare earths	1.5 to 9	to 0.2
Ellsworthite (see Betafite).....			
Eschynite-priorite series.....	Oxides of, essentially, niobium, titanium and rare earths, with uranium and thorium, etc.	to 5.5	to 18
Eschynite.....	Rich in cerium group of rare earths and, generally, thorium		
Priorite.....	Rich in yttrium group of rare earths; also usually higher in uranium than eschynite		
Euxenite-polycrase series.....	Oxides of, essentially, niobium, tantalum, titanium and rare earths, with uranium and thorium, etc.	to 14	to 5
Euxenite.....	High niobium + tantalum member		
Lyndochite.....	Relatively high in calcium, low in uranium	0.7	5
Polycrase.....	High titanium member		
Fergusonite-formanite series.....	Oxides of, essentially, niobium, tantalum, yttrium and erbium, with uranium and thorium, etc.	to 8	to 5
Fergusonite.....	Niobium-rich member		
Fourmarierite (S).....	Hydrated oxide of lead and uranium	77	—
Gadolinite.....	Silicate of rare earths, beryllium and iron	to 0.5	to 2
Gummite (S).....	Generic term for alteration products of uraninite and pitchblende	65 to 77	—
Hatchettolite (see Betafite).....			
Kasolite (S).....	Hydrated silicate of lead and uranium	48	—
Lessingite.....	Silicate of rare earths and calcium	(No analysis available)	—
Liebigite (S).....	Hydrated carbonate of calcium and uranium	40	—
Lyndochite (see Euxenite-polycrase series).....			
Masuyite (S).....	Hydrated oxide of uranium	87	—
Melanocerite.....	Fluosilicate of, chiefly, the cerium and yttrium groups of rare earths and calcium	—	to 3
Meta-allanite (see Allanite).....			
Metatorbernite (S).....	Hydrated phosphate of copper and uranium	60	—
Metazeunerite (S).....	Hydrated arsenate of copper and uranium	55	—
Microлите (see Pyrochlore-microлите series).....			
Monazite.....	Phosphate of the cerium group of rare earths, with thorium	to 0.7	1 to 15
Perovskite.....	Essentially calcium titanium oxide; some varieties contain niobium and rare earths	(No analysis available)	—
Phosphuranylite (S).....	Hydrated phosphate of calcium and uranium	69	—
Pitchblende (see Uraninite-thorianite-cerianite series).....			
Polycrase (see Euxenite-polycrase series).....			
Priorite (see Eschynite-priorite series).....			
Pyrochlore-microлите series.....	Oxides of niobium, tantalum, calcium and sodium, with uranium, etc.	to 18	to 9
Pyrochlore.....	Niobium-rich member		
Uranian pyrochlore.....	High in uranium		
Sabugalite (S).....	Hydrated phosphate of aluminum and uranium	63	—
Saleeite (S).....	Hydrated phosphate of magnesium and uranium	61	—
Samarskite.....	Oxide of, essentially, niobium, tantalum, rare earths, iron and uranium	4 to 17	to 4
Calcosamaraskite.....	Relatively high in calcium		
Sklodowskite (S).....	Hydrated silicate of magnesium and uranium	67	—
Sodydyte (S).....	Hydrated silicate of uranium	85	—
Studtite (S).....	Hydrated carbonate of uranium	High	—
Thorianite (see Uraninite-thorianite-cerianite series).....			
Thorite.....	Thorium silicate	to 5	50 to 80
Uranothorite ³	High in uranium and water	5 to 21	40 to 60
Thorogummite (S).....	Hydrated thorium silicate, with uranium	to 35	25 to 60
Thucholite.....	Hydrocarbon with uranium, etc.	variable	variable
Toddite (see Columbite-tantalite).....			
Torbernite (S).....	Hydrated phosphate of copper and uranium	56	—
Tyuyamunite ⁴	Hydrated vanadate of calcium and uranium	59	—
Uraconite.....	Hydrated sulphate of uranium (discredited species, probably uranopilite or zippeite)		
Uraninite (see Uraninite-thorianite-cerianite series).....			
Uraninite-thorianite-cerianite series.....			
Uraninite ^{3,4}	Uranium dioxide with, usually, thorium and rare earths	65 to 95	to 10
Pitchblende ^{3,4}	Uranium dioxide, with no, or negligible, thorium or rare earths	60 to 85	less than 0.1
Thorian uraninite.....	High in thorium	45 to 65	10 to 35
Thorianite.....	Thorium dioxide, with, usually, uranium and rare earths	to 10	75 to 93
Uranian thorianite.....	High in uranium	10 to 40	40 to 75
Cerianite.....	Cerium dioxide	—	5
Uranophane ³ (S).....	Hydrated silicate of calcium and uranium	66	—
Uranopilite (S).....	Hydrated sulphate of uranium	80	—
Uranospinite (S).....	Hydrated arsenate of calcium and uranium	54	—
Uranothorite (see Thorite).....			
Vandendriesscheite (S).....	Hydrated oxide of lead and uranium	80	—
Xenotime.....	Phosphate of, essentially, yttrium and erbium	to 4	to 2.5
Zippeite (S).....	Hydrated sulphate of uranium	76	—
Zeunerite (S).....	Hydrated arsenate of copper and uranium	53	—
Zircon.....	Zirconium silicate	to 0.5	to 0.1
Cyrtolite.....	With water, rare earths, uranium and thorium	to 2	to 1

¹ U₃O₈ and ThO₂ contents, which in some instances are theoretical, are taken from standard references and do not necessarily represent analyses of Canadian specimens.

² Names indented are those of members of series and of varieties of preceding species.

³ Principal Canadian ore minerals.

⁴ Principal ore minerals in other countries.

(S) Supergene minerals.

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