SIGNIFICANCE OF U AND Th CONTENT OF GRANITIC ROCKS OF VISAKHAPATNAM DISTRICT, ANDHRA PRADESH

DURING an integrated study of the granitic rocks of Visakhapatnam District, U and Th contents are determined. The data presented here are significant in exploration for uranium deposits.

The granitic rocks investigated in Narsipatnam Taluk (lat 17° 30′ to 17° 33′ and long 82° 27′ to 82° 32′) are in the form of bands conformable with khondalitic suite of rocks. The granites are adamallitic to granodioritic, coarse, gneissic to granulitic. Often the *k*-feldspar occurs as porphyroblast in a matrix of biotite. The essential minerals of these granitic rocks are alkali feldspar, quartz, garnet and biotite. The accessory minerals are zircon, sillimanite, magnetite rarely pyrite and chalcopyrite.

U and Th were estimated at B.A.R.C., Bombay, by the method of Neutron–Activation analysis, details of which are described elsewhere (B. Satyanarayana[5]). The overall precision of estimation of both U and Th is of the order of 5 to 10%. The following table gives the U and Th content in granitic rocks and also Th/U ratio.

TABLE I

U and Th contents of the granitic rocks

No. of sample	U (ppm)	Th (ppm)	Th/U (ppm)
S 16	14·0	23	1·64
T 50	2·8	13	4·64
D 2	3·8	181	47·63
S 3	5·2	310	59·61
T 22	1·9	15	7·89
B 11	4·7	3·4	0·72
T 24	1·1	15	13·64
S 10	17·0	9·7	0·57
60 X	2·6	2·4	0·92

The U and Th contents of the above granitic rocks are compared with those from Singhbhum (Saha *et al.*) and from Karnataka (Divakara Rao *et al.*[3]). The large variation of both U and Th in these granitic rocks agree with metasomatic type rather than the magmatic. The granitic rocks show generally high Th and U.

The Th/U ration ranges from 0·57 to 59·61 in contrast to the usual average 3 to 4 acid intrusives (Admas *et al*[1]). The average Th/U ratio 15·25 of the present work is very high in contrast to the Th/U ratio average of 1·01 to 2·36 for different series of Singhbhum granite (Saha *et al.*[4]).

The anomalously large U and Th values of the high grade metamorphics of the present area, need exploration for U and Th bearing deposits. Such type of U—deposits can be expected in metamorphic terrains and belong to metamorphic hydrothermal type. Occurrence of such U deposits is known in Nabarlek, Alligator District, Australia (vein type), Shinkolovwe, Zaire (stock work type) and Rossing, S. A. (pegmatite), Ranger, Alligator District, Australia (replacement type), Cornelius[2].

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A NEW RECORD OF *PHOMOPSIS* CAUSING LEAF SPOT OF *ARGYREIA SPECIOSA*

A SEVERE leaf spot of *Argyreia speciosa* Bojer locally known as 'Ghaopatta' was observed during September–October, 1977 in the Ayurvedic garden of Banaras Hindu University, Varanasi. It is an ornamental as well as medicinal plant.

On leaves, the early symptoms develop as small pale yellow spots, becoming brown with age, surrounded by darker periphery; sometimes these coalesce to form irregular patches of several mm in length. The blight symptoms are distinct only on the upper surface of the leaves and these areas give a rough touch due to the development of numerous submerged pycnidial