## Occurrence of Celestite in the Phosphatic Nodules of Utatur

SEVERAL investigators[1,2,3] have reported on the extensive deposits of phosphatic nodules in the Utatur area. Crushed specimens of phosphatic nodules revealed the presence of a white platy mineral which filled the cracks in the nodule and appeared to have concentrated near the core. Since it could be easily loosened and isolated and also since it comprised more than 3 per cent. (even 10 per cent. in exceptional cases) of the entire nodule, it was obtainable in sufficient quantity for study.

A careful chemical examination which involved the separation of calcium, strontium and barium by reliable methods showed that the mineral consisted approximately of 93 per cent. of strontium sulphate, 4 per cent. of the sulphates of calcium and barium and 3 per cent. of quartz.

We have also examined a lump of celestite occurring in the gypsum beds in the same area. This specimen was a massive aggregate of columnar crystals each of which was 10–12 mm. long.

In view of the fact that no significant deposits[1,5,6,7] of strontium minerals in India have so far been known to exist, this finding of a large source of strontium compounds in the Utatur area appears to be of some importance to this country.

A detailed study of the occurrence of celestite and of other minerals occurring in the Utatur area is now in progress.

N. JAYARAMAN.
K. R. KRISHNASWAMI.
Dept. of General Chemistry,
Indian Institute of Science,
Bangalore,
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[1] Blanford *Mem. Geol. Surv. Ind.*, 1862, **4**, 83.
[2] Sivan, *Year Book of the Mad. Agric. Dept.*, 1918.
—, *Proc. Ind. Sci. Cong.*, 1922, 29.
—, *Ibid*, 1924, 44.
[3] Rama Rao, *Quart. Jour. Geol. Min. Met. Soc. Ind.*, 1931, **4**, 49.
[4] Blanford, *Mem. Geol. Surv. Ind.*, 1880, **17**, 196.
[5] Coggin Brown, *India's Mineral Wealth*, 1936, 277.
[6] Jones, *Rec. Geol. Surv. Ind.*, 1888, **21**, 36.
[7] Hughes-Buller, *Ibid.*, 1904, **31**, 45.