

GOVERNMENT OF INDIA
MINISTRY OF MINES
LOK SABHA
UNSTARRED QUESTION NO. 791
ANSWERED ON 07.02.2024

TANTALUM

791. SHRI MANISH TEWARI:

Will the Minister of MINES be pleased to state:

- (a) the specification of tantalum;
- (b) whether it has been discovered by the Indian Institute of Technology (IIT), Ropar in Satluj, if so, the level of abundant of tantalum in the region;
- (c) whether the presence is sufficient for commercial extraction of the mineral and if so, the details thereof;
- (d) whether tantalum is a strategic mineral and if so, its value and terms of its use in electronics and semi-conductors;
- (e) whether there has been any research conducted on the samples of tantalum to determine its purity and commercial viability and if so, the details thereof;
- (f) whether the recently discovered deposits of lithium piqued the attention of America and China; and
- (g) if so, whether the Ministry is considering any policy/method to protect India's Rare-Earth minerals and secure it from being exploited by foreign countries?

ANSWER

THE MINISTER OF MINES, COAL AND PARLIAMENTARY AFFAIRS
(SHRI PRALHAD JOSHI)

(a): Tantalum (Ta) is a high melting point metal with good conductivity, excellent machinability and high stability in acidic environment. It is generally recovered as by-product associated with niobium, tin, lithium etc.

(b): Indian Institute of Technology, Ropar (IIT Ropar) in one of its research papers has reported high tantalum values (10.52% mass) from the poorly graded sand/ sub-angular particle samples from the Satluj river bank, Punjab. During the course of geochemical mapping done by Geological Survey of India (GSI) in the area, the average value of tantalum in the sediment/floodplain samples vary between 1.08 ppm and 1.66 ppm which are well below the average crustal abundance of 2 ppm. Subsequent to the report of IIT Ropar, GSI has collected 4 sediment samples from the same locations for further analysis.

(c): In view of (b) above, question does not arise.

(d): Tantalum bearing minerals are considered as critical and strategic minerals as per Part-D of First schedule of amended Mines and Mineral Development and Regulations (MMDR) Act, 2023.

Tantalum is used in the production of electronic components mainly capacitors and some high-power resistors. Tantalum capacitors are widely used in portable telephones, personal computers, automotive electronics and cameras. Tantalum is

also used to produce a variety of alloys that have high melting points, strength, and ductility. Alloyed with other metals, it is also used in making carbide tools for metalworking equipment and in the production of superalloys for jet engine components, chemical process equipment, nuclear reactors, missile parts, heat exchangers, tanks, and vessels. Tantalum is widely used in making surgical instruments and implants.

(e): In view of (b) above, Question does not arise.

(f): The Central Government has put two blocks of lithium for auction on 29th November 2023.

(g): India's interest from being exploited by foreign countries in any sector, including minerals, is governed by provisions of policy on Foreign Direct Investment and Trade.
