GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO - 4070
ANSWERED ON 12/08/2026

DOMESTIC SELF-SUFFICIENCY IN CRITICAL MEDICAL RADIOISOTOPE SUPPLY

4070. SHRI RADHAKRISHNA

Will the PRIME MINISTER be pleased to state:-

(a) the details of domestic production capacity and actual output of critical medical radioisotopes such as Molybdenum-99/Technetium-99m used in Indian hospitals during each of the last five years;

(b) the quantity imported during the said period and the countries of origin;

(c) the details of the number of instances of supply shortage reported by hospitals/nuclear medicine centres during this period; and

(d) the steps taken by the Government to enhance domestic radioisotope production capacity and reduce import dependence?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH)

(a) Molybdenum-99 (Mo-99), Iodine-131(I-131) and Lutetium-177 (Lu-177) are the most important reactor-produced medical radioisotopes, accounting for nearly 90% of all Nuclear Medicine applications. Owing to their relatively short half-lives, these medical radioisotopes are produced at regular intervals, typically on a weekly or fortnightly basis in the Dhruva reactor, Bhabha Atomic Research Centre (BARC).

The total activity of ^{99}Mo, ^{131}I and ^{177}Lu based radiopharmaceutical products produced and supplied during the past five years is detailed below.

Radioisotope	**Production capacity (Ci)**	**Production Data (Ci)**				
		2021-22	**2022-23**	**2023-24**	**2024-25**	**2025-26**
Lu-177	50 Ci/batch	473	532	684	681	976
^{99}Mo-^{99m}Tc	50 Ci/week	662	693	268	283	550
I-131	50 Ci/week	749	813	710	623	770

(b) During maintenance shutdown of reactor/radiochemical processing facility or non-availability due to technical reasons, these radioisotopes are procured through imports from overseas producers for production and supply of radiopharmaceuticals to nuclear medicine centres.

The details of the medical radioisotopes imported during such periods, along with the quantities imported, are summarized in the Table below.

Radio-isotope	**Imported Quantities and Country of Origin(Curies)**				
	2021-22	**2022-23**	**2023-24**	**2024-25**	**2025-26**
Lu-177	-	-	-	10 Ci (Russia)	136 Ci (Russia)
Mo-99	460 Ci Australia, Russia	430 Ci Australia, Russia	30 Ci Egypt, Russia	230 Ci Egypt, Russia	516 Ci Belgium, Russia
I-131	219 Ci Poland, South Africa	-	-	174 Ci Poland, South Africa	421 Ci Russia, South Africa, Belgium

(c) While Board of Radiation & Isotope Technology (BRIT) a constituent unit under Department of Atomic Energy has been able to supply the confirmed orders to an extent of ~ 90 % in conditions of normal operations, there have been shortfalls due to unforeseen shutdown of reactor/radiochemical processing facilities due to technical reasons and non-availability of imported backup supplies during such contingencies.

The details of supply shortfalls during the past five years are presented below**:**

Radioisotope	**Short supply/Cancellation**				
	2021-22	**2022-23**	**2023-24**	**2024-25**	**2025-26**
Mo-99 (52 batches/annum)	2 batches	1 batch	13 batches	19 batches	Nil
I-131 (52 batches/annum)	1 batch	Nil	4 batches	10 batches	3 batches
Lu-177 (52 batches/annum)	Nil	2 batches	2 batches	7 batches	3 batches

(d) Bhabha Atomic Research Centre (BARC) a Research and Development unit under Department of Atomic Energy (DAE) has obtained administrative and financial sanction to the project “Engineering and Construction of Isotope Production Reactor”. It is expected that production is likely to start around 2035 with 0.5 MCi(million Curie) radio-isotope production capacity.

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