

Senate Standing Committee on Economics
ANSWERS TO QUESTIONS ON NOTICE
Innovation, Industry, Science and Research Portfolio
Budget Estimates Hearing 2009-10
01 June 2009

AGENCY/DEPARTMENT: AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION

TOPIC: OPAL Reactor

REFERENCE: Written Question – Senator Eggleston

QUESTION No.: BI-8

What proportion of supplies of nuclear medicines to Australian hospitals is met by ANSTO? What are the other sources of the remainder?

ANSWER

ANSTO is a supplier of both therapeutic and diagnostic radioisotopes to the Australian market. Diagnostics make up approximately 90% of radioisotopes ANSTO supplies, with therapeutics constituting some 10%.

In the 2008/09 financial year it is estimated that ANSTO supplied in the order of 1,580,000 radiopharmaceutical dose equivalents to the Australian market. This supply is dominated by Technetium-99m, which is used in approximately 80% of diagnostic procedures in nuclear medicine in Australia.

The following table provides the percentage proportions of ANSTO's supply of specific radioisotopes to the Australian Market. The proportions estimated in the table do not include radioisotopes used in clinical trials and research.

Radioisotope	Use	ANSTO Share
Technetium-99m	Diagnostic	~95%
Thallium- 201	Diagnostic	~100%
Gallium-67	Diagnostic	~100%
Iodine-123	Diagnostic/Therapeutic	100%
Iodine-131	Therapeutic	~95%
Chromium-51	Diagnostic	~100%
Samarium-153	Therapeutic	~100%
Yttrium-90	Therapeutic	~100%
Fluorine-18	Diagnostic	0% (see note 1)

Other sources of radioisotopes used in nuclear medicine include hospital cyclotrons, and overseas and domestic suppliers of both cyclotron and reactor produced isotopes.

A small number of infrequently used radioisotopes are also supplied to the Australian market by ANSTO, overseas and domestic suppliers. Note 1: A major radioisotope is Fluorine-18 which is used in PET camera diagnosis. This is produced in hospital cyclotrons and by two commercial suppliers. PETNET Solutions, an ANSTO subsidiary will begin production of Fluorine-18 during 2009, subject to regulatory approvals.