

FGM-1

2-DEOXY-2-[¹⁸F]FLUORO-D-GLUCOSE ([¹⁸F]-FDG)

(DIAGNOSTIC-FOR INTRAVENOUS ADMINISTRATION)

¹⁸F-2-fluoro-2-deoxy-D-glucose (C₈H₁₁¹⁸FO₅) is a PET radiotracer produced in an automated radiochemical synthesis module from cyclotron produced Fluorine-18. FDG is an analog of glucose and accumulates in cells after injection. FDG is trapped as FDG-6-phosphate intra-cellularly because it cannot be metabolized further. [¹⁸F]FDG can hence be used to image any organ/tissue that utilizes glucose as the main source of energy. FDG is used in oncology, neurology and cardiology.

- Oncology- Diagnosis of presence and location of metastases of several types of malignancies. Also for Radioisotope Guided Surgery (RIGS) using intraoperative hand held radiation probe
- Neurology - Measurement of regional glucose metabolism in human brain to assist in the management of many neuro and psychiatric disorders
- Cardiology - Confirmation of myocardial viability

Description	: ¹⁸ F as 2-Deoxy-2-Fluoro-D-Glucose in saline
Appearance	: Clear, colourless, aqueous preparation
Radionuclidic purity	: >99% as ¹⁸ F
Radiochemical purity	: >95% as ([¹⁸ F]-FDG)
pH	: 4.5 to 8.5
Specific activity	: >55 MBq/mg ([¹⁸ F]-FDG)
Shelf life	: 8 hours after calibration time at ambient temperature
Availability	: Daily around 11 a.m. from Medical Cyclotron Facility (MCF), BARC, Parel (Due to its half-life of 110 min. users should be able to transport and utilise the product within a short time)
Dosage	: Normal adult dose : 10-15 mCi (370-555 MBq) for PET scanner & 5-8 mCi (185-296 MBq) for the Hybrid SPECT/PET dual head gamma camera
Administration	: Intravenously, as a bolus followed by a saline flush
Storage	: Store at 15-25°C in a shielded container
Pack size	: Multidose vial, upto 250 mCi (9.25GBq)



For placing the orders and further details please contact
Customer Support Services Cell (CSSC)

Board of Radiation and Isotope Technology

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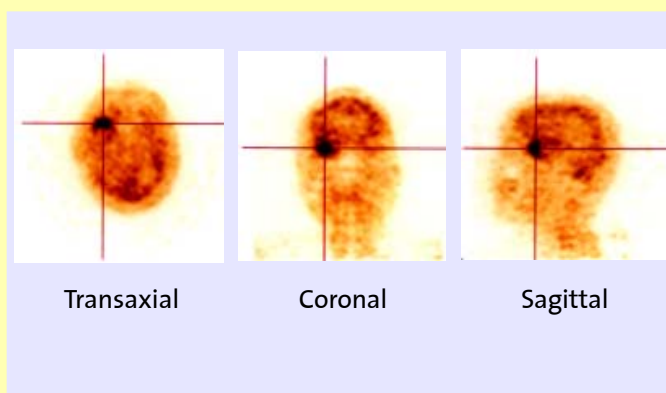
Code	Description	Activity
FGM-1	¹⁸ F as 2-Deoxy-2-Fluoro-D-Glucose in saline	15 mCi, 40 mCi, 90 mCi, 180 mCi, 250 mCi as on the reference date

Physical Characteristics of Fluorine-18

Half life	109.8 min.
Decay mode	β^+
E _{β^+} (%)	633.5 keV (max), 249.8 keV (mean) (96.73%)
E _{γ} (%)	511 keV (193.46%) annihilation photons

Decay Chart for Fluorine - 18

Minutes	Fraction Remaining	Minutes	Fraction Remaining
-30	1.21	150	0.388
-15	1.10	180	0.321
Reference time	1.00	220	0.250
15	0.909	240	0.220
30	0.826	300	0.150
45	0.753	330	0.125
60	0.683	360	0.103
90	0.567	420	0.071
110	0.500	440	0.060



PET image of a tumour in the brain



A hybrid PET-SPECT-CT Camera



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