



NEW Automatic dose drawing station

Mod. μ DDS-A (patent pending)

The NEW automatic dose drawing station Mod. μ DDS-A allows a safe and quick drawing of a dose of

- ▶ PET radiopharmaceuticals
- ▶ SPECT radiopharmaceuticals

into a shielded syringe without any intervention of the operator.

The dose drawing station can be used into certified Laminar Flow shielded cells Mod. NMC (image 1), in order to grant radioprotection of the operators and to preserve sterility of the FDG, or into any other cell of adequate dimension.

The new dispenser can perform automatically, with one high precision dose calibrator:

- ▶ measurement of both total and specific activity coming from synthesis module or from external vial;
- ▶ dilution of the bulk activity at the required concentration;
- ▶ single syringe dispensing at the required activity;
- ▶ single syringe dilution at the required volume;
- ▶ vial dispensing to the required volume and activity.

Moreover the system allows to measure the residual activity inside the syringe after the injection and its database storage.

The μ DDS-A is compact and easy to handle: these features assure improved ergonomy and an easy manual backup of the FDG in case of system failure.

This new dispenser is a cheap, versatile and up-to-date solution for any need in Nuclear Medicine and PET radiopharmaceutical products dispensing, as it guarantees:

- ▶ high accuracy in FDG activity and volume dispensed in syringe, also in conditions of high activity concentration (e.g. EOS);
- ▶ quickness in syringe dispensing;
- ▶ sterility of the dispensed product, thanks to the use of dedicated disposable kits;
- ▶ good data traceability and FDA 21 CFR part.11 compliance.

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Performances

- Volume accuracy: $\sigma < 8 \mu\text{l}$
- Mean filling time (per syringe): < 60 sec.

Examples of activity accuracy in typical Radiopharmacy conditions (End Of Synthesis: 120 mCi/mL - 10 mCi Syringe and 30 mCi/mL - 10 mCi Syringe):

EOS Concentration	120	mCi/mL
Requested Activity in syringe	10	mCi (i.e. 0,083 mL FDG)
Accuracy	9,6	%

EOS Concentration	30	mCi/mL
Requested Activity in syringe	10	mCi (i.e. 0,33 mL FDG)
Accuracy	2,4	%

Dimensions (image 2)

- Length: 250 mm
- Total width: 200 mm (w/ saline sol. Bottle)
- Total height: 180 mm (w/ saline sol. Bottle)
- Shielding: built-in 40 mm lead shielded container for main vial (image 3)

Activity Measure System

- 1 precise dose calibrator

Sterility

- New design for easier cleanly surfaces
- Easy-to-install sterile daily disposable Kits

Volumes Transfer System

- Zero-dead-volume 4 rollers pump
- Pneumatic pinch valves

Software

- FDA 21 CFR part. 11 compliant
- Modules: Patients Database, Dose Calibrator management, Residue Measure, Statistics, Easy to use patient data setup
- On-line downloadable dose archive database

Kit

- Daily disposable kit Mod. DDK-N/TUBING
- Daily disposable kit for radiopharmaceutical transferring Mod. DDK-N/LU
- Daily disposable kit for specific activity assessment Mod. DDK-N/CA
- Daily disposable kit w/ 6 vials Mod. DDK-DU/VLS
- Daily disposable kit w/ 15 syringes Mod. DDK-A/SYR
- Daily disposable kit w/ 1 saline solution bottle Mod. DDK-A / PHYSIO

Kits configuration

Needs			Needed KITS					
Feeding	Measurement of main vial activity and concentration	Vials filling	DDK-N TUBING	DDK-N CA	DDK-N LU	DDK-A SYR	DDK-A PHYSIO	DDK-DU VLS
From synthesizer	yes	yes	yes	yes	yes	opt	opt	opt
From synthesizer	yes	no	yes	yes	no	opt	opt	no
From synthesizer	no	no	yes	no	no	opt	opt	no
From external vial	yes	yes	yes	yes	yes	opt	opt	opt
From external vial	yes	no	yes	yes	yes	opt	opt	no
From external vial	no	no	yes	no	yes	opt	opt	no

Tema Sinergie gives available dedicated kits Mod.DDK-A/SYR, DDK-A/PHYSIO and DDK-DU/VLS: anyhow, as they consist of commercial items, they can be bought from the customer directly from relevant producers without passing through Tema Sinergie.

PET Centers

Nuclear
Medicine

Radiotherapy

Diagnostic
Radiology

Environmental
Monitoring

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Applications

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Applications



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