



This quick start guide is intended to provide a quick overview of your DOSE IT's key features and to offer basic instructions for getting started. For detailed information, please refer to the latest operating instructions (OI) that can be found at www.integra-biosciences.com in different languages.

Intended use

This is a general-purpose laboratory instrument. Any use of this instrument in a medical or IVD setting is the sole responsibility of the user. The programmable peristaltic pump DOSE IT is used to dispense or pump liquids in a volume range of 0.1 ml to 9999 ml in silicone tubings.

⚠ Safety information

Regardless of the listed safety notes, all locally applicable regulations must be observed.

- 1) DOSE IT may only be used by properly trained personnel in a manner specified by INTEGRA Biosciences.
- 2) Observe the hazard warnings on the device. Keep your hands out of rotating wheels inside the pump head. There is a risk to squash your fingers.
- 3) Servicing work and repairs may only be performed by INTEGRA Biosciences or an authorized after-sales service member.
- 4) Regular servicing of the DOSE IT is recommended.

Getting started



Set up the instrument on a planar surface according to the IQ/OQ document (PN 171273). Supply voltage: 100 – 240 VAC, 50 – 60 Hz, 70 W.

Connect the AC adapter cable to the socket on the rear side of the DOSE IT and plug it to the electricity mains.



- a. Operating panel with display and keypad
- b. Pump head
- c. Back-key
- d. Main switch on the rear side

Switch on/off:
Press the main switch.

Switch on the device. The APPLICATIONS window is displayed with three menu options:



- **START:** To execute the selected program of DISPENSE, PUMP or CUSTOMIZE type.
- **PARAMETER:** To define the selected program.
- **SYSTEM:** To configure general device parameters.

Language selection

Press **SYSTEM** and Language. Select a language and press SAVE. Set other system parameters to your requirements.

Tubing selection



The choice of tubing depends on the requirements for speed and precision of dosing. The larger the inner diameter (ID) of tubing, the faster but less precise is the dispensing. Precision in the table below is expressed as coefficient of variation (CV) and describes the scattering range of the dispenses relative to the mean.

Tubing inner diameter	1 mm	2 mm	3 mm	4 mm	6 mm
Dosing volume at CV <1 %	>0.5 ml	>1 ml	>3 ml	>7 ml	>15 ml
Speed range (ml/min)	0.6 – 52	2.1 – 203	4.8 – 475	8.4 – 837	16 – 1634

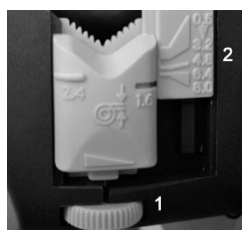
To dispense with CV <1 %, search the table for the desired dosing volume (e.g. 5 ml, i.e. >3 ml) and read the appropriate tubing ID (e.g. 3 mm). The 8 mm tubing is only recommended for PUMP modes.

Loading the tubing in the pump head



Always switch off the DOSE IT when loading the tubing and when manipulating the open pump head.

- Open the cover of the pump head. The adjustment of the screws (1) on both sides of the pump head depends on the tubing inner diameter (ID). Adjust the 1.6 marking of the clamps as follows:



Tubing ID	1.6 marking of the clamps
1 mm	between 3.2 and 4.8 scale values
2 mm	matches the 4.8 value on the scale (2)
3 mm	matches the 6.4 value on the scale (2)
4 – 8 mm	as low as possible, completely open

- Place the tubing into the pump head. Make sure that the tubing runs over the rollers and centrally through the two V-shaped clamps. Carefully close the pump head.
- Connect the dispensing and aspiration tubes with tube collar, if required.

Adapt a dispensing program

In the APPLICATION window the first programs are already pre-defined with default values.

- Select a program to be defined using the arrow keys and press **PARAMETER** in order to adjust the program.
- Using the arrow keys, select a parameter you wish to change. Press **CHANGE** and follow the information on the screen.
- Use the **DISPENSE** type for dosing and the **PUMP** mode for continuously pumping of a liquid.
- The **CUSTOMIZE** type allows to define a program consisting of up to 20 single steps, see OI. The predefined programs **DENSITY GRADIENT**, **DISH COATING** and **DILUTION 1 TO 10** are examples of this.

Run a dispensing program

- Select a previously defined program and press **START**.
- Put the tubing end with the aspiration tube in the liquid and hold the **PRIME** key pressed until the tubing is completely filled without bubbles.
- The first time you start a program or use a tubing, carry out a calibration of the dosing volume by pressing **CALIBRATE** and follow the instructions on the screen. To reduce the measurement error, press repeatedly **DOSING** and dispense up to ten samples. Press **CONTINUE**, enter the measured volume and press **CHANGE**. Press **CONTINUE** to end the calibration.
- Press **START**. While dispensing, you can **PAUSE** and adjust the program at any time.

Maintenance



The DOSE IT requires periodical cleaning in order to ensure safe and reliable operation. Always switch off the device and disconnected form the electricity supply when carrying out maintenance work.

Cleaning:

- If the DOSE IT get soiled, it can be cleaned with a cloth moistened with soapy water or with a 70 % solution of ethanol.

Decontamination:

- The silicone tubing, tubes and tube collars can be autoclaved at 121 °C for at least 20 min. If the surface of the DOSE IT has been contaminated, wipe it with a lint-free cloth lightly soaked with a suitable disinfectant and wipe dry directly.

Greasing:

- Check the moving parts of the pump head from time to time for freedom of movement. Occasionally lightly grease the lever and the rollers with Teflon lubrication oil, see OI.

Equipment Disposal



DOSE IT must not be disposed of with unsorted municipal waste.
Dispose of DOSE IT in accordance with the regulations in your area governing disposal of devices.

Manufacturer

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Declaration of conformity

INTEGRA Biosciences AG – 7205 Zizers, Switzerland

declares on its own responsibility that the device

Description	Model
DOSE IT P910	171 000

complies with:

EU Directives

Low Voltage Equipment	2014/35/EU
Electromagnetic Compatibility	2014/30/EU
Restriction of Hazardous Substances	2011/65/EU
Waste Electrical and Electronic Equipment	2012/19/EU

EU Regulations

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)	1907/2006
Ecodesign - Power supplies	278/2009

Standards for EU


Safety requirements for electrical equipment for measurement, control and laboratory use - General requirements.	EN 61010-1: 2010
Electrical equipment for measurement, control and laboratory use - EMC requirements.	EN 61326-1: 2013

Standards for Canada and USA

Safety requirements for electrical equipment for measurement, control and laboratory use - General requirements.	CAN/CSA-C22.2 No. 61010-1
Safety requirements for electrical equipment for measurement, control and laboratory use - General requirements.	UL 61010-1
Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.	Part 15 of the FCC Rules Class A

Zizers, March 2, 2020


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