

Dispensing Disk Set

The large dispensing head comes with a sampler of 11 pre-calibrated dispensing disks (its dosing element) covering the volumetric dose range of 7mm³ - 8000mm³. This range corresponds to single dose sizes of about 2mg – 15g (depending on bulk densities; see below).

The disks can be swapped readily in the dispensing head (see user manual pages 17 of SDH-1 and page 16 of the SDB-1).

Disk		1	2	3	4	5	6	7	8	9	10	11
Volume		7mm ³	30mm ³	75mm ³	105mm ³	260mm ³	600mm ³	900mm ³	1500mm ³	3500mm ³	5500mm ³	8000mm ³
Example Material A: Bulk density 0.3g/ml	1x dose:	2.1mg	9mg	22.5mg	31.5mg	78mg	180mg	270mg	450mg	1.05g	1.65g	2.4g
	2x dose:	4.2mg	18mg	45mg	63mg	156mg	360mg	540mg	900mg	2.1g	3.3g	4.8g
	3x dose:	6.3mg	27mg	67.5mg	94.5mg	234mg	540mg	810mg	1350mg	3.15g	4.95g	7.2g
Example Material B: Bulk density 0.7g/ml	1x dose:	4.9mg	21mg	52.5mg	73.5mg	182mg	52.5mg	630mg	1.05g	2.45g	3.85 g	5.6g
	2x dose:	9.8mg	42mg	105mg	147mg	364mg	105mg	1.26g	2.1g	4.9g	7.7 g	11.8g
	3x dose:	14.7mg	63mg	157.5mg	220.5mg	546mg	157.5mg	1.89g	3.15g	7.35g	11.55 g	16.6g
Example Material C: Bulk density 1.0g/ml	1x dose:	7mg	30mg	75mg	105mg	260mg	75mg	900mg	1.5g	3.5g	5.5g	8.0g
	2x dose:	14mg	60mg	150mg	210mg	520mg	150mg	1.8mg	3.0g	7.0g	11g	16.0g
	3x dose:	21mg	90mg	225mg	315mg	780mg	225mg	2.7g	4.5g	10.5g	16.5g	24.0g
Example Material D: Bulk density 1.9g/ml	1x dose:	13.3mg	57mg	142.5mg	199.5mg	494mg	142.5mg	17.1g	2.85g	6.65g	10.45g	15.2g
	2x dose:	26.6mg	114mg	285mg	399mg	988mg	285mg	34.2g	5.7g	13.3g	20.9g	30.4g
	3x dose:	39.9mg	171mg	427.5mg	598.5mg	1.48g	427.5mg	51.3g	8.55g	19.95g	31.35g	45.6g

With this array of swappable dispensing disks, a multitude different dose sizes becomes available by switching disks in the dispensing head as well as selecting multiple shots of the single dose value.

More detailed information (including calculators to convert to dose sizes in mass) can be found here:

<https://xqinstruments.com/dispensing-solutions/#methods-applications>

The dispensing disk sampler allows experimenting with different dose volumes and multiple dose shots to obtain the desired results. This can help if the bulk density of the material is not established and samples cannot be made available to XQ Instruments for calibration.

For specific dose volumes which are not falling exactly onto one of these dispensing disk sizes, we continue to offer custom calibration of dispensing disks to any specific volume in the range, and these disks come with testing and calibration certificate.