



SONIPREP MSE 150

Ultrasonic disintegration

The Soniprep 150 transmits sound energy to the medium through high frequency vibration at the tip of an interchangeable probe. The effect of this is to create many series of micro-cavities in the dispersion medium. The rapid alternates of positive and negative pressure produced by the sound waves travelling through the liquid cause these minute gas filled bubbles to disintegrate implosively during the rarefaction phase of the sound pressure wave. This produces intense local shock waves in which the pressure may reach several thousand atmospheres and rapid microstreaming of the liquid around the points of collapse. The intense localised shear gradients so generated combined, in part, with the transient regions of high pressure, result in the disruptive capabilities of this instrument.

Varied applications

The Soniprep 150 can be used for a wide variety of applications, but is mainly used for the disintegration, disruption and homogenisation of cells and cellular particles. Its use occurs in various environments from biochemistry and microbiology to soil science and polymer research. It has gained a much sought after reputation in this field as being versatile, compact and easy to use.

Choice of probes

The choice of 3 probes covers the needs of most applications. The exponential probe can be used for particularly small volumes down to 2ml and the larger probes can be used for increased volumes or continuous flow applications.

A range of tubes and vessels is also available to accommodate samples for the various applications that may be needed. Rubber sealing caps are available if the tubes need to be sealed during the disruption process.

Sound reducing cabinet

The Soniprep 150 comes as standard with a sound reducing cabinet to help to minimise disturbance to operators working near the unit. The frequency of operation has been specially selected to operate at levels higher than those normally audible to the human ear to help to maintain minimum noise levels.

Despite the fact that the Soniprep 150 comes as standard with a soundproof cabinet, it requires a relatively small degree of bench space. The new improved cabinet requires even less space than the previous model which will be an additional benefit to those with limited bench space. It is also lighter and therefore easier to transport should the need arise.

The clear door of the Soniprep 150 allows the operator to observe the sample whilst sonication is taking place thus allowance can be made for aerosol production or spillages.

Amplitude meter

An amplitude meter is positioned at the front of the Soniprep 150 to monitor the probe amplitude. It is calibrated in microns and gives the actual peak to peak movement that is taking place by using the relevant multiplication factor for the desired probe.

This gives a more accurate reflection of what the probe is doing unlike some sonicators which merely give a reading of the power input into the probe. This does not necessarily reflect the optimum power transfer to the sample.

Process timer available

The Soniprep 150 comes with a standard 10 minute timer plus an override switch. This allows the operator the opportunity to perform continuous or timed sonication up to 10 minutes. The override switch is particularly useful to the user who wishes to use the continuous flow facility for through flow sonication. The continuous flow feed and exit lines can be accessed to the continuous flow vessel via the apertures present at the rear of the unit.

In addition to the standard 10 minute timer that is available on the Soniprep 150, there is a process timer available. This allows the operator the flexibility to accurately time sonication for reproducible results. It also allows the operator the facility to pulse sonication to help prevent heat buildup over a period of time. Pulse times can vary from 1 to 99 seconds and can be controlled in minutes or cycles.

All in all, it can be seen that the Soniprep 150 has become an indispensable item in laboratory ultrasonics by offering a unique blend of facilities. It has gained an enviable reputation, along with other MSE products, for giving long term service combined with excellent long term reliability. These factors combined make the Soniprep 150 the obvious choice when it comes to laboratory ultrasonic applications.

RECOMMENDED SAMPLE VOLUMES	2 - 100ml and continuous flow
MAX. DIMENSIONS	Height: 450mm Width: 470mm Depth: 258mm Weight: 18,7Kg
TIMER	0-10 mins with override available for continuous sonication
CATALOGUE NUMBER	MSS150.CX3.5 for 220/240V 50 Hz MSS150.CX3.1 for 110/120V 60Hz
Note: Probes and other accessories must be ordered separately	

CATALOGUE NUMBER	PROBES	
38121-114A	Exponential microprobe for use with volumes of up to 10ml.	
38121-1154	Solid probe 9.5mm diameter for use with volumes up to 50ml.	
38121-1169	Solid probe 19mm diameter for use with volumes of up to 100ml	
CATALOGUE NUMBER	COOLED TREATMENT VESSELS	
48535-1011	Batch treatment vessel	
48533-1016	Continuous flow vessel	
CATALOGUE NUMBER	TUBES AND SEALING CAPS	
34411-8237	100ml glass tube, heat resisting 40 x 102mm	
34411-8222	50ml glass tube, heat resisting 29 x 110mm	
34411-8163	20ml glass tube, heat resisting 29 x 50mm	
34431-4168	Rubber sealing cap for 20ml and 50ml tubes with 9.5mm probe	
34431-8136	Rubber sealing cap for 20ml and 50ml tubes with 19mm probe	
34431-4094	Rubber sealing cap for 20ml and 50ml tubes with exponential microprobe	
34431-4115	Rubber sealing cap for all cooled treatment vessels and 100ml tube with exponential microprobe	
34431-4187	Rubber sealing cap for all cooled treatment vessels and 100ml tube with 19mm probe.	
34431-4172	Rubber sealing cap for all cooled treatment vessels and 100ml tube with 9.5mm probe.	
46222-5019	Process timer unit.	

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