



# Homogenisers

Homogenisation is a very common sample preparation step prior to the analysis of nucleic acids, proteins, cells, metabolism, pathogens, and many other targets. The Stuart<sup>®</sup> range of homogenisers are designed especially for the homogenisation of material, such as tissue, plant, food, soil, and many others.



# Homogenisers

## Handheld Homogeniser, SHM1

- Ergonomic design
- Variable motor speed 5,000 to 35,000rpm
- Processing range from 0.03ml-100ml
- Can be used with robust polycarbonate disposable probes or stainless steel ones

The Stuart® SHM1 is a powerful, variable speed, homogeniser. The high-speed, high-torque motor makes the unit ideal for most homogenising applications. During operation the rotor shaft, which is directly coupled to the motor, spins at up to 35,000rpm. The tube assembly that fits around the shaft remains static and as the rotor shaft spins, within the tube assembly, it creates a pumping action drawing the sample into the open end of the tube, or probe, and forcing it through the windows at the bottom of the tube assembly. This shearing action reduces the particle size of the sample. In addition the speed differential between the rapidly moving rotor, and the static tube assembly creates cavitation force, further dismantling the sample to additionally reduce particle size.

The SHM1 is lightweight making it comfortable to use, and most samples can be processed within thirty seconds. For longer processing the unit can be stand mounted using the included post clamp assembly. A retort stand is available separately.

All Stuart® homogenisers are supplied with a tool kit for dismantling the rotor probes for easy cleaning.

### Technical Specification

	SHM1
Motor	125 watt
Speed control	5,000 to 35,000rpm
Processing range	0.03ml to 100ml
Sound level	<72 db
Net weight, kg	0.5
Dimensions, mm (h x Ø)	160 x 55
Electrical supply	220-240V, 50Hz
IP Rating	30

### Ordering Information

Model	Description
SHM1/UK	Handheld homogeniser, UK plug
SHM1/EURO	Handheld homogeniser, European plug



SHM1



SHM1 with SHM/  
STAND

# Homogenisers



SHM3

## Laboratory Homogeniser, SHM3

- Variable motor speed 5,000 to 25,000rpm
- Can be handheld or stand mounted
- Processing range from 200µl to 5L
- Powerful 850 watt motor

With an 850 watt motor, the Stuart SHM3 is not only powerful but provides maximum versatility being able to process virtually any sample, from tissue homogenisation, cell disruption, emulsions, suspensions to protein extraction. The SHM3 features a digital control system, ensuring accuracy and repeatability, selected speeds are accurate to +/- 100rpm. The digital control system also incorporates a timer which can be set from seconds to minutes and includes a 30 second countdown timer, ideal for remote applications in fume hoods or biosafety cabinets. Soft start also ensures smooth processing without splashing.

The SHM3 can either be handheld for quick processes or securely stand mounted with a direct connection to the SHM/STAND.

The SHM3 can not only, accommodate a selection of stainless steel probes for larger samples, but also the Stuart reusable polycarbonate disposable probes. Disposable probes are suitable for hard tissues and ideal where cross contamination is of concern. If necessary disposable probes can be easily dismantled and autoclaved up to seven times. Through careful selection of probe type, samples of 200µl to 2L can be processed.

All Stuart homogenisers are supplied with a tool kit for dismantling the rotor stator generator probes for easy cleaning.



SHM/20

## Technical Specification

	SHM3
Motor	850 watt
Control	Digital
Timer	1s – 10 min with 30s start delay
Speed control	5,000 to 25,000rpm
Processing range	<200µl to 2L
Sound level	220 x 70
Weight	220-240V, 50Hz
Dimensions (h x Ø)	30
Electrical supply	220-240V, 50Hz

## Ordering Information

Model	Description
SHM3	Laboratory homogeniser, supplied with UK & Euro plug

See back page for a selection of probes and accessories

# SHM Probes

These homogeniser probes have been designed specifically for use with the Stuart® range of homogenisers.

The disposable probes are manufactured from robust polycarbonate, and can either be disposed of after each sample or autoclaved, up to seven times. Ideal where cross sample contamination is of concern.

The stainless steel probes are available in a variety of sizes to suit your processing needs, all are precision engineered and suitable for autoclaving. The stainless steel 5mm probe comes with a flat end, all other probes have a saw tooth end and are capable of processing hard or frozen tissue.

Model:	SHM/5	SHM/7	SHM/10	SHM/20	SHM/DISP
Size:	5mm	7mm	10mm	20mm	7mm
Type:	Flat head	Saw tooth	Saw tooth	Saw tooth	Saw tooth
Length:	75mm	115mm	115mm	195mm	110mm
Processing Range:	0.03ml - 5ml	0.25ml - 30ml	1.5ml - 100ml	50ml - 2l	0.25ml to 30ml



## Ordering Information

Model	Description
SHM/5	5mm Stainless steel probe
SHM/7	7mm Stainless steel probe
SHM/10	10mm Stainless steel probe
SHM/20	20mm Stainless steel probe
SHM/DISP	Disposable probes, pack of 25

# SHM Stand & Accessories

The SHM/STAND has been purpose built to hold the Stuart® homogenisers, it couples directly to the SHM3 and attaches to the SHM1 clamp holder, included with SHM1. The stand is heavy duty to remain stable during use and comes with a rubber coated base to help stabilise samples during processing.

## Technical Specification

SHM/STAND	
Base, mm (w x d x h)	220 x 304 x 11
Rod, mm (Ø x h)	16 x 610
Net weight, kg	3.6



## Ordering Information

Model	Description
SHM/ADAPT	Adaptor for disposable probes
SHM/STAND	Stand compatible with SHM1 & SHM3
SHM/TOOL	Replacement tool kit to disassemble stainless probes

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