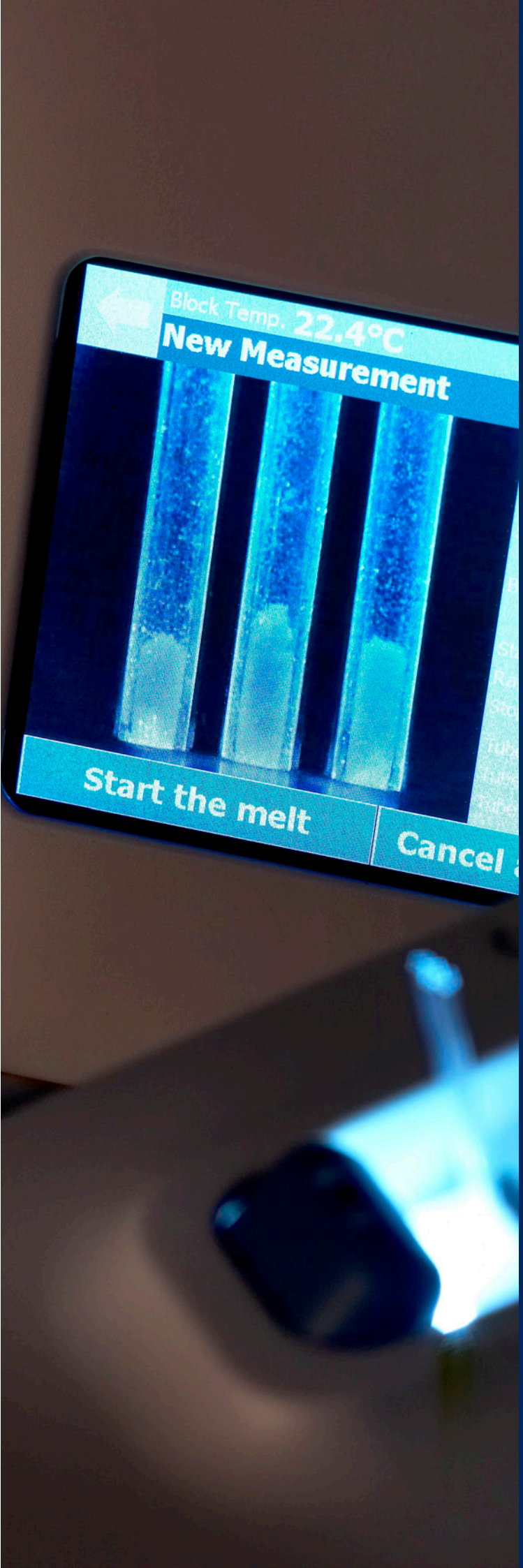


stuart®

Melting Point Range

with BioCote® antimicrobial protection

Stuart® has become the laboratory name in melting points. Offering solutions to determine high accuracy melting points from manual to automatic units, to accommodate all users.

Introducing the SMP40

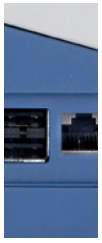
In recent years, Stuart® has become the laboratory name in melting points. For the first time, Stuart® has introduced an automatic melting point, the SMP40. The automatic melting point accurately identifies the melting point of up to three samples simultaneously via the latest technology in digital imaging. Stuart®'s previous 'top of the range' unit has also been improved to include further useful and innovative features.

The latest melting point from Stuart® uses a digital camera to identify the smallest of changes within the sample, allowing accurate, and reliable, automatic identification of the melting point of your material. An automatic melting point frees the user time to allow them to do other things, and with the full colour display on the SMP40 you can watch the sample melt real time, just in case you want to keep an eye on the result.

5.7" colour VGA touch screen

All control of the SMP40 is via the colour touchscreen display, the user interface has been custom designed for melting point applications and is quick and easy to navigate. On the screen a full colour display of the samples is shown in real time, just in case you want to check on the automatic result. Once samples have been run the video files are retained as standard .avi files and can be viewed on the unit after the event or transferred to PC to retain traceability long term.

Storage and connectivity



The SMP40 can retain approximately 200 results with video's for reviewing at a later date. Alternatively the unit has USB ports for connection to flash drive or PC via Microsoft® ActivSync, so the video files can be more permanently stored as a long term record.

Calibration

All units are factory supplied with a calibration certificate showing individual serial number for traceability. The SMP40 also conforms to Pharmacopeia and GLP.

Split design concept

The Stuart® automatic melting point is the first melting point to utilise a split concept. The control side can be separated from the sample side allowing maximum footprint flexibility, the sample side can be located at the back of the bench to give more space or even in a fume cupboard if required. The control side can also be used in two orientations, either landscape or portrait, this allows a more comfortable viewing angle whether you are stood or sat at the bench. The control side automatically detects which orientation it is in and flips the screen to always be the right way up.

Protective safety hood

The design on the SMP40 utilises a protective safety hood which, when loaded, protects your samples from accidental sideswipes. The hood also acts as a light shield ensuring that adjustments in the ambient lighting conditions don't affect the automatic melting point determination.

Block Cleaning

It is inevitable that at some point in the life of a melting point apparatus the block will need cleaning. The SMP40 has been cleverly designed to allow easy access to the block to make this necessary job as easy as possible.

Pre-prepared sample storage

The SMP40 features a handy storage area where pre-prepared samples can be safely stored.

IQ/OQ Documentation

All units are supplied with a calibration certificate showing individual serial number for traceability. The SMP40 also conforms to Pharmacopeia and GLP. It is also available with IQ/OQ documentation.

Digital Melting Points

The SMP10 and SMP20 have been designed with safety and ease of operation in mind making it ideal for use in education. The temperature is selected, measured and displayed digitally making it accurate and negating the need for a thermometer. The SMP10 displays temperature to 1 degree resolution while the more advanced SMP20 has a 0.1 degree resolution as well as a variable ramp rate and hold key so that the exact melt temperature can be recorded.

Clear observation and use

Two samples can be tested simultaneously. They are viewed via a magnifying lens with clear observation aided by built in illumination. Extendible back feet allow the unit to be operated at the optimum viewing angle. Full access to the block aids cleaning. The simple to follow instructions are printed directly on the instrument in most European languages for ease of use.

Storage and connectivity

To operate simply select a plateau temperature via the digital display and press “start”. The unit quickly heats up and remains at the selected plateau temperature until the user is ready to start the test. Insert the sample tubes and press “start”. The unit then heats at a fixed rate of 2°C per minute for the SMP10 and at a user selected rate of between 1 and 10°C per minute for the SMP20. When the sample is seen to melt, note the temperature on the display. Press “stop” to end heating and cool the block.

Melting Point Apparatus

Designed for fast accurate determination of melting points, the SMP30 can take three samples simultaneously within the optimised heating block, the unit has a maximum temperature of 400°C. To allow maximum flexibility a plateau facility is included with variable ramp rate between 0.5 and 10°C in 0.1°C increments. The tubes are illuminated with bright white LED's to give the clearest view of the samples during the melt. The block has been designed for easy access for cleaning, the front of the head is fully removable to allow full access to the micro furnace.

Head-up display

The SMP30 has a large clear back lit alphanumeric LCD display, running the menu system which clearly guides you through the melting process with comprehensive directions. Language is switchable between English, German, French and Italian. It is possible to record up to 8 events in memory for each of the three sample tubes, as well as being temperature stamped these events are also date and time recorded, thanks to the integrated real time clock.

The SMP30 features an innovative head up display. This unique feature displays a floating image of the block temperature, visible through the eyepiece, in front of the tubes. The head up display eliminates the need for the user to keep switching their gaze between the tubes and the temperature display, through the eyepiece they can now see both at once.

Head adjustment

To allow the most comfortable viewing angle the SMP30 features a two stage head adjustment, in the first movement the head is pulled towards the user, then in a separate motion the angle of the head can be adjusted by up to 126°, and will automatically hold in place due to the torsion resistant design to create the perfect viewing angle. The head can then be stored safely back within the body of the unit for storage.

The design of the unit has lots of other useful features such as slots for storing pre-prepared samples and a storage draw to hold a container of capillary tubes.

An accessory printer is available separately to produce a written record of the melt, and all units are supplied with a calibration certificate showing individual serial numbers for traceability.

Analogue Melting Point

With new safety features and easy to use, the SMP11 is ideal for use in lower education.

Supplied with a safe, spirit filled mercury free thermometer, the low toxic blue spirit will not pose a health hazard in the event of a breakage. Easy to follow instructions are printed directly on to the apparatus and are available in most European languages.

Clear observation and use

With a manually adjustable heating rate, the SMP11 will rapidly heat samples up to 20°C per minute to the melt temperature and up to the maximum temperature of 250°C. Accurate readings to within 1°C of the melt temperature can be achieved by using a slower heating rate of between 1 and 10°C per minute.

Up to three samples can be viewed and tested at any one time. Samples are illuminated by a bright white LED and viewed via a magnifying lens. The magnifying lens can be detached for cleaning using the simple to follow instructions printed on to the instrument.

Stuart® Melting Point Range

	SMP11	SMP10	SMP20
Melting point method	Analogue	Digital	Digital
No of samples	3	2	2
Temperature range	50°C to 250°C	Ambient to 300°C	Ambient to 300°C
Temperature resolution	-	1°C	0.1°C
Display	-	Three digit LED	Four digit LED
Ramp rate	1 to 10°C per minute	20°C per minute plateau 20C per minute to melt	20°C per minute plateau variable between 1-10°C per minute to melt
Temperature sensor	Thermometer	PT100 Platinum resistance	PT100 Platinum resistance
Memory	No	No	No
Accessory printer	No	No	No
Date/time display	No	No	No
Cool down time 350-50°C	-	40 mins (300-50°C)	40 mins (300-50°C)
Heat up time 50-350°C	15mins	15 mins	15 mins
Electrical supply	230V, 50Hz, 50W	230V, 50Hz, 50W	230V, 50Hz, 50W
Onboard capilary storage	No	No	No
In-built glass cutter	No	No	No
Language variants	English, German, French French, Spanish	English, German, French French, Spanish	English, German, French French, Spanish
Temperature units	°C	°C	°C
Dimensions h x d x w	110 x 140 x 370	170 x 220 x 160	170 x 220 x 160
Net weight (kg)	1.7	1.8	1.8

	SMP30	SMP40
Melting point method	Digital	Automatic via digital imaging
No of samples	3	3 simultaneously
Temperature range	Ambient to 400°C	Ambient to 400°C
Temperature resolution	0.1°C	0.1°C
Display	40x 4 LCD	5.7" Colour VGA touchscreen
Ramp rate	0.5-10°C in 0.1°C increments	0.1-10°C in 0.1°C increments
Temperature sensor	PT100 Platinum resistance	PT100 Platinum resistance
Memory	8 results per tube	200 results with video
Accessory printer	Yes	No
Date/time display	Yes	Yes
Cool down time 350-50°C	12 mins	10 mins
Heat up time 50-350°C	6 mins	6 mins
Electrical supply	230V, 50Hz, 50W	230V, 50Hz, 50W
Onboard capilary storage	Yes	Yes
In-built glass cutter	Yes	Yes
Language variants	English, German, French Italian, Spanish	English, French
Temperature units	°C	°C, °F
Dimensions h x d x w	325 x 200 x 170	175 x 210 x 328
Net weight (kg)	3.6	3.2

Melting point tubes

Tube overall length:	100mm
Tube diameter:	1.9mm
Inner diameter:	1.3mm
Wall thickness:	0.3mm

Ordering information

Product Code	Description
SMP11	Analogue melting point apparatus, complete with thermometer and pack of 100 open ended melting point tubes
SMP10	Digital melting point apparatus, 1°C resolution, complete with pack of 100 melting point tubes, closed at one end
SMP30	Digital melting point apparatus, 0.1°C resolution, complete with pack of 100 melting point tubes, one end closed
SMP40	Automatic melting point apparatus, complete with pack of 100 melting point tubes, closed at both ends.
SMP30/1	Accessory printer with power supply, only for use with SMP30
SMP2/1	Glass melting point tubes, closed at both ends, pack of 100
SMP1/4	Glass melting point tubes, open at both ends, pack of 100
SMP10/1	Glass melting point tubes, closed at one end, pack of 100

Resources

www.thebestmeltingpoint.com

Stuart® are proud to announce the new microsite **www.thebestmeltingpoint.com**. The microsite is dedicated to the extensive range of Melting Points and accessories offered by Stuart®.

www.thebestmeltingpoint.com contains all the relevant product information and resources from Videos to Manuals, Images to Product descriptions.

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