

Melting Point M-560/565



Melting Point M-560 and Melting Point M-565 – Facile determinations of melting points and boiling points

The latest generation of Buchi Melting Point Apparatus once again sets the future's gold standard of exact melting and boiling point determinations. The standard instrument, manual Melting Point M-560, and the video camera equipped instrument, fully automated Melting Point M-565, are both high quality and precise pieces of laboratory equipment. Equipped with a precision magnifying lens to detect the slightest change in the capillaries and an intuitive menu structure on a bright colour display, the instruments guarantee fast and reliable results from the first run onward. In combination with the Sample Loader M-569, the time consuming procedure of loading samples into the capillaries is now easy, homogeneous and reproducible.



Highlights of the Melting Point Line

- Choose between manual or automatic instrument for Melting and Boiling Point determination
- Increased temperature range from room temperature up to 400 °C
- All instruments are equipped with magnifying lens for visual control
- Unchanged approved coating of the heating block for fast cleaning and a long lifetime
- Compliant with Pharmacopeia as PH. EUR. 6.1.2.2.60, USP XXI 741 and JP
- GLP/GMP compliant protocols either with printer or on PC.
- IQ/OQ for Melting Point M-565 available

Basic Set: Melting Point M-560 – Manual melting point determination for universities and research laboratories

The attractively priced Melting Point M-560 for the manual determination of melting and boiling points is designed for all laboratories with a moderate requirement of sample processing in a non-regulated environment.



Delivery content

The Basic Set consists of the instrument and accessories for the installation, reliable calibration and convenient determination of the first 100 melting points.

- Melting Point M-560 Instrument
- 100 Melting Point Capillaries
- 10 Boiling Point Capillaries
- 10 Boiling Point Tubes
- Calibration Set M-560/M-565 for the first installation
- Packing wire for samples with a waxy consistence
- Sample Holder for the confusion free preparation of 12 melting point and 4 boiling point samples



Increase your efficiency of the Melting Point M-560 and M-565



Mini Keyboard

For the convenient, straightforward input of parameters.



Serial Printer

For documenting the results of calibration, melting and boiling point determinations.



Sample Loader M-569

Instrument for the homogenous loading of samples into Büchi melting point capillaries.

Professional Set: Melting Point M-565 and Sample Loader M-569 – Automatic melting point determination for higher sample throughputs

The video camera equipped Melting Point M-565 for the automatic determination of melting and boiling points is designed for true, professional quality control. When used in combination with the Sample Loader M-569, determinations are achieved with unrivalled reproducibility. Optional, comprehensive IQ/OQ documentation is available in five different languages for customers working in a regulated environment. Intuitive PC software is also available for the handling of large amounts of user, method and result data generated.

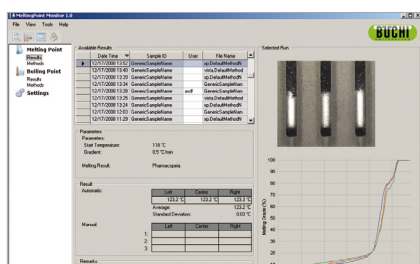


Delivery content

The Professional Set consists of the two instruments and a wide range of accessories for the installation, reliable calibration and convenient determination of the first 100 melting points.

- Melting Point M-565 Instrument
- Sample Loader M-569 Instrument
- 100 Melting Point Capillaries
- 10 Boiling Point Capillaries
- 10 Boiling Point Tubes
- Calibration Set M-560/M-565 for the first installation
- Packing wire for samples with a waxy consistence
- Sample Holder for the confusion free preparation of 12 melting point and 4 boiling point samples

Exclusive Accessory of the Melting Point M-565



MeltingPoint Monitor Software

Software for the easy and convenient management of user, method and result data.



IQ/OQ Documentation

Installation Qualification needed for the initial installation of the Melting Point M-565, either after shipment or movement to a new workplace. Including Operational Qualification to guarantee the instrument meets predefined specifications.



OQ Documentation

Repeating operational qualification to guarantee that the instrument meets predefined specification.

Features of the M-560 and M-565

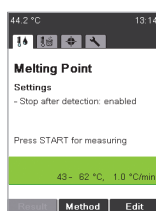
Precision lens with 2.5 times magnification for a precise determination of the samples



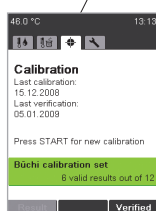
Optimised design of the heating block allows faster cooling times and therefore higher sample throughput per hour



Brilliant large colour display with a high resolution for comfortable control of the instrument



Fully menu guided, exacting calibrations when using the Buchi Calibration Standards



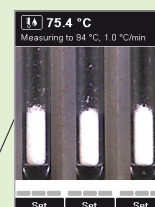
Optional Keyboard and Printer for a fast input of sample parameters and a direct, standardised output of results



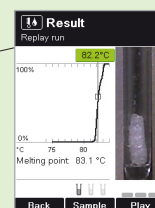
Additional Features of the M-565

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Automatic determination of melting and boiling point for a higher efficiency



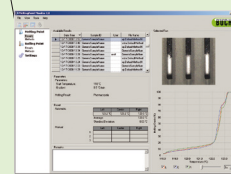
Relaxed, fatigue free observation of the phase transition on the 6x magnified colour display



Video movie of determinations allows the review of each measurement. Variable speed playback from single frame slow motion through to 100x real time



Optional IQ/OQ Documentation for customers in a regulated environment. No need to create validation documents. Available in five languages...



Optional Melting Point Monitor Software for easy and safe management of user, methods and results data

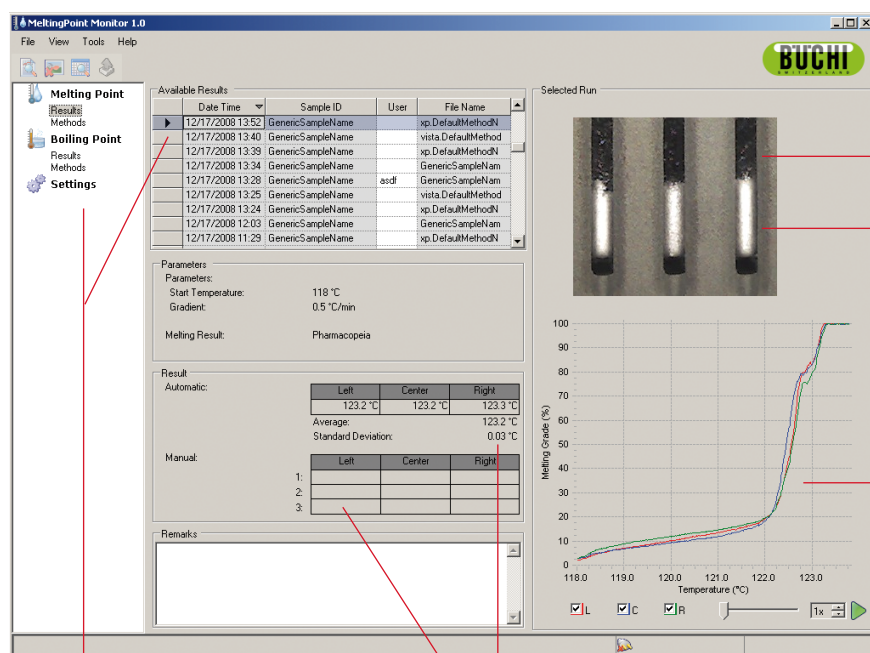
Sample Loader M-569 – World Novelty

- Unique system for the loading of melting point capillaries
- Reproducible results due to consistent, homogeneous packing quality
- Loading times substantially reduced when compared to conventional methods
- Easy and safe handling of samples and capillaries:
 - No risk of cross contaminations as with the glass tube procedure
 - No Risk of breaking capillary eliminated when compared to manual knocking method
- Compact design with a stable stand
- Three position switch for permanent operation or operation during pressing
- Invaluable when packing large numbers of capillaries
- In the delivery content of Melting Point M-565
- Optional accessory for Melting Point M-560 and previous Buchi Melting Point instruments



MeltingPoint Monitor – Professional PC-Software for the Melting Point M-565

For the intuitive, user friendly management of user, methods and results data in combination with the ability to observe the melting and boiling point determination movies, MeltingPoint Monitor software is essential for non-tolerant, routine work, for example, as found in quality control. Subsequent observation of the melting curves and melting video after the determination identifies any failures in packing of the capillary, combustion of the substance or presence of excess impurities and subsequently reduces the repetition of measurements.



Melting point or
boiling point video

Actual temperature
according to video
play time

Melting or boiling point curves

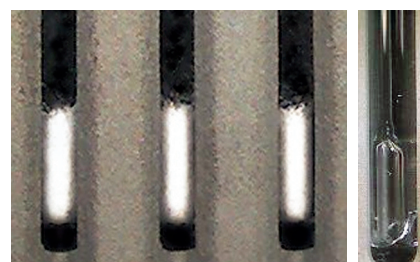
Method and Result database

Overview of automatic and manually
determined results

Available Results			
Date Time	Sample ID	User	File Name
12/17/2008 13:52	GenericSampleName		xp.DefaultMethodN
12/17/2008 13:40	GenericSampleName		vista.DefaultMethod
12/17/2008 13:39	GenericSampleName		xp.DefaultMethodN
12/17/2008 13:34	GenericSampleName		GenericSampleNam
12/17/2008 13:28	GenericSampleName	asdl	GenericSampleNam
12/17/2008 13:25	GenericSampleName		vista.DefaultMethod
12/17/2008 13:24	GenericSampleName		xp.DefaultMethodN
12/17/2008 12:03	GenericSampleName		GenericSampleNam
12/17/2008 11:29	GenericSampleName		xp.DefaultMethodN

Left	Center	Right
123.2 °C	123.2 °C	123.3 °C
Average:		123.2 °C
Standard Deviation:		0.03 °C

Left	Center	Right
1:		
2:		
3:		



Method and Result Management

Comfortable database structure for easy archiving and recovery of previous measurements. Various sort functions by name, user and date.

Overview of Results

Succinct overview of the automatically detected results, showing the average value and standard deviation, allows interpretation from one view. Additional, manually determined results are shown below.

Melting Point and Boiling Point Screen video display

After the measurement, any previous movie can be reviewed at various speeds from single frame advancing to 100x actual speed. Moving the scrollbar to the start point of a melting process reduces the observation time.

GLP/GMP compliant IQ/OQ for Melting Point M-565

Analytical instruments must be calibrated and verified at regular intervals according to a written procedure. The necessary accuracy is ensured by this instrument and the Operation Qualification.



Complete Qualification Packages

The initial qualification covers the Instrument Qualification (IQ) and the Operation Qualification (OQ). The IQ verifies that the instrument is correctly installed and in good working order. The OQ demonstrates the functioning of the instrument within its working specifications.

For the Melting Point M-565 Buchi offers an IQ/OQ package for the initial installation and an OQ renewal for the routine verification that the instrument still fulfils its specifications.

Accuracy – Competence Meets Quality

To reduce the time spent preparing documents and test plans, complete documentation is provided in five different languages. The qualification package also includes specifically certified calibration and verification standards which can be traced back to the international temperature scale ITS-90 and comply with the strictest requirements.

If the quality of your Instrument has to comply with very strict audit requirements then Buchi can offer the installation, calibration and qualification of your instrument by a fully certified service technician.

You save time and only need to approve the qualification of your instrument on the completion of all work.

IQ/OQ Package for Melting Point M-565

- Instrument Logbook
- IQ documentation
- OQ documentation
- OQ label
- Calibration kit M-565
- Verification kit M-565
- 100 melting point capillaries
- Available in E, D, F, I, ES

OQ renewal for Melting Point M-565

- IQ documentation
- OQ documentation
- OQ label
- Calibration kit M-565
- Verification kit M-565
- 100 melting point capillaries
- Available in E, D, F, I, ES

Overview of Ordering Information

Instruments



Basic Set: Melting Point M-560
Economic Instrument for the manual detection of melting and boiling points.
100 V–240 V, 50/60 Hz

Order no. 051999



Sample Loader M-569
Instrument for a fast and homogenous loading of samples into melting capillaries.
100 V–240 V, 50/60 Hz

Order no. 051997

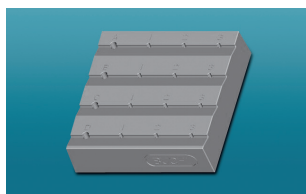


Professional Set: Melting Point M-565 and Sample Loader M-569
High end Melting Point M-565 for the automatic and manual detection of melting and boiling points. Includes the Sample Loader M-569 for an effective packing of samples into melting capillaries.
100 V–240 V, 50/60 Hz

Order no. 051998



Accessories for Melting Point M-560 and Melting Point M-565



Sample Holder
For the confusion free preparation of 12 melting point and 4 boiling point samples.

Order no. 11055014



Mini Keyboard
For convenient straightforward input of parameters.

	Order no.
German (CH)	029509
English (USA)	029508



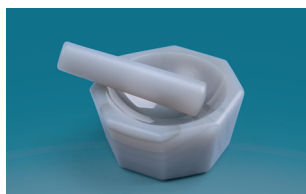
Serial Printer
For the documentation of results of calibration, melting and boiling point determinations.

100 V–240 V, 50/60 Hz
Order no. 11055438



Calibration Kit M-560/5
Consists of four Buchi certified standards for the calibration of the Melting Point M-560 or the Melting Point M-565.

Order no. 11055018



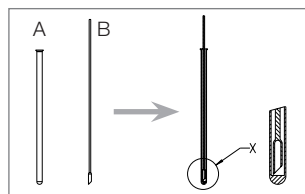
Agate Mortar and Pestle
For high purity sample crushing. The polished surface is easy to clean, preventing cross-contamination

Order no. 041867



Melting point capillaries
The precision glass capillaries ensure highly reproducible melting point determinations.

	Order no.
100 pieces	017808
1000 pieces	001759



Boiling Point Tube A
Boiling Point Capillary B
The precision capillaries B generate perfect gas bubbles within tube A for reproducible boiling point determinations.

Order no.	A	B
10 pieces	019697	051850
100 pieces	019007	051890



Verification Kit M-560/M-565
Consists of three Buchi certified standards for the verification of the Melting Point M-560 or the Melting Point M-565.

Order no. 11055019

Exclusive Accessories for Melting Point M-565



MeltingPoint Monitor Software
Software CD, Tutorial and single PC license. For installation under Windows Vista or Windows XP.

Order no. 11055332



IQ/OQ M-565	Order no.
English	11055004
German	11055005
French	11055006
Spanish	11055007
Italian	11055008






OQ M-565	Order no.
English	11055009
German	11055010
French	11055011
Spanish	11055012
Italian	11055013



Certification and Installation service offer
Installation, calibration and certification performed by a Buchi certified service technician.

Order no.
for Switzerland 900402

For other countries please contact your local distributor

			
	Melting Point M-560	Melting Point M-565	Sample Loader M-569
Manual melting point determination	✓	✓	–
Manual boiling point determination	✓	✓	–
Automatic melting point determination	–	✓	–
Automatic boiling point determination	–	✓	–
Homogeneous sample loading	–	–	✓
Positions for melting capillaries	3	3	3
Positions for boiling capillaries	1	1	–
Precision magnifying lens	✓	✓	–
Magnification of lens	2.5 x	2.5 x	–
Digital camera	–	✓	–
Video function	–	✓	–
Magnification, Display	–	6 x	–
Display	Colour, TFT, 320 x 240, 3.5"		–
Determination temperature range	ambient to 400 °C		–
Temperature resolution	0.1 °C		–
Accuracy up to 100 °C	+/- 0,3 °C		–
up to 250 °C	+/- 0,5 °C		–
up to 400 °C	+/- 0,8 °C		–
Temperature gradients, °C/min	0.1, 0.2, 0.5, 1, 2, 3, 5, 10, 20		–
Heat-up time (50 °C–350 °C)	~ 4 min		–
Cool-down time (350 °C–50 °C)	~ 10 min		–
Electrical supply	100–240 V (±10%), 50–60 Hz		100–240 V
Power consumption	150 W		15 W
Contact termination	L, N, PE		L, N
Approval	CE, UL		–
Dimensions (W x H x D), mm	190 x 200 x 370		70 x 86 x 130
Weight, kg	4.5		0.5
Environmental conditions	For indoor use only		
Temperature	5–40 °C		
Altitude	up to 2000 m		
Humidity	Maximum relative humidity 80% for temperatures up to 31 °C, decreasing linearly to 50% relative humidity at 40 °C		
Overvoltage category	II		
Degree of protection	IP20		
Pollution degree	2		

System requirements	MeltingPoint Monitor Software
Processor	32-or 64-bit Processor with 1 GHz
Memory	512 MB (RAM)
Hard disk	40 GB hard disk with at least 15 GB free
Operating system	Windows XP Professional SP2 or higher Windows Vista Ultimate (32-bit version) Windows Vista Business (32-bit version)
Drive	CD ROM
Serial interface	1 x USB 2.0



Evolution of Melting Point Instruments – More than 50 years Innovation Leadership



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