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# Eppendorf ThermoMixer C/F0.5/F1.5/F2.0/FP ThermoStat C

SOP - Operational Qualification - English

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English (EN)

## 1 Introduction

### 1.1 Using this manual

- ▶ Make sure that the service manual and the operating manual are available in the latest versions. To do so, compare the version numbers. The latest versions of the manuals can be downloaded from [www.eppendorf-support.com](http://www.eppendorf-support.com) and [www.eppendorf.com](http://www.eppendorf.com).
- ▶ Read the service manual before commencing work on the device.
- ▶ Read the chapters "Installation" and "Operation" of the operating manual.
- ▶ Observe the safety instructions in the operating manual.

### 1.2 Notes on liability

The Eppendorf service organization entrusted with maintenance, servicing or testing is liable for ensuring that all work is carried out in a professional manner.

- ▶ Repair, maintenance and testing may not change the existing construction of the device. The device must always be as safe as it is in its original state.
- ▶ Only accessories and original spare parts recommended by Eppendorf, and measuring and test equipment recommended by Eppendorf may be used for any maintenance, servicing or testing work.

### 1.3 User profile

The specialist entrusted with maintenance, repair or testing must meet the following prerequisites:

- Successful participation in service trainings with certification by Eppendorf AG for the product that is to be maintained, repaired or tested.
- Qualification as a specialist with knowledge of the applicable local and international standards.
- Qualification to evaluate the work assigned to him.
- Recognition of potential hazards and how to prevent or correct them.

### 1.4 Notes on this document

- ▶ Include other documents, such as explanations, printouts, recordings and results, with the OQ. List these documents under "Appendices".
- ▶ At the end of this OQ, you will find a list for documenting all inspections which were completed on a device. Enter the test you performed, and the date of the next test, into this list.
- ▶ If a list is already available at the customer's premises, enter the test you have performed into this list. Do not use a new list for each test.

### 1.5 Abbreviations

OQ – Operational Qualification

SM – Service Manual

OM – Operating Manual

**Introduction**

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**1.6 Device data**

Company/owner	
Location of device (building, floor, room, laboratory, etc.)	
Storage site of the operating manual	
Version of the operating manual (version number on the inside of the front cover)	
Storage site of the service manual	
Version of the service manual (version number on the inside of the front cover)	
Inventory number of the device	
Manufacturer	
Type designation	
Serial number	
Software/firmware version	
Voltage in V	
Frequency in Hz	
Date of installation (day/month/year)	

**1.7 Responsible persons****Responsible technician**

Name, first name:

Company:

Certificate (issued on ... / valid until ...):

Signature:



Copies of the technician's certificates can be enclosed as appendices. List these documents at the end, under "Appendices".

**User / Responsible for quality**

Name, first name:

Company:

Signature:

## 2 OQ – Eppendorf ThermoMixer C/F0.5/F1.5/F2.0/FP, Eppendorf ThermoStat C

### 2.1 Test equipment



- You can find information on the test equipment specification in the Service Manual.
- Copies of the calibration certificates for this test equipment can be added as appendices to this OQ. List these documents at the end of this OQ, under “Appendices”.

Type	Type/serial number	Calibration on	Calibration certificate no.
Temperature measuring device			
RPM tester			
Stopwatch			

### 2.2 Device overview

#### Product numbers, device names and abbreviations

- 5382: Eppendorf ThermoMixer C (TMC)
- 5383: Eppendorf ThermoStat C (TSC)
- 5384: Eppendorf ThermoMixer F1.5 (TMF1.5)
- 5385: Eppendorf ThermoMixer FP (TMFP)
- 5386: Eppendorf ThermoMixer F0.5 (TMF0.5)
- 5387: Eppendorf ThermoMixer F2.0 (TMF2.0)



Eppendorf ThermoMixer Fxx and TMFxx: abbreviation for Eppendorf ThermoMixer F0.5/F1.5/F2.0/FP.

### 2.3 OQ Checklist

#### 2.3.1 Visual check

No.	SM/OM section	Check	Yes	No
OQ 1	_____	Is the device damage-free?		
OQ 2	_____	Are the accessories, such as SmartBlocks or ThermoTop, free from damage?		

#### 2.3.2 Functional check

No.	SM/OM section	Check	Yes	No
OQ 3	OM, Chapter 5	<b>SmartBlock detection (TMC and TSC).</b> Does the device detect the individual SmartBlocks correctly?		



Which temperature you can set depends on the SmartBlock that is used or the device version of the Eppendorf ThermoMixer Fxx.

- ▶ Enter the name and the serial number of the SmartBlock that is used into the field provided for this purpose.
- ▶ You will find the temperature tolerances in the technical data in chapter 11 of the service manual. Enter the temperature tolerances into the fields provided for this purpose.



The Eppendorf ThermoMixer Fxx devices and the SmartBlocks do not have the same maximum speeds. It may not be possible to verify certain speeds.

- ▶ Please refer to the devices' instructions for use and the operating manual of the SmartBlocks.

No.	SM/OM section	Check	Measured value	Yes	No
OQ 4.1.1	SM chapter 10 and 11	<b>Temperature (TMC and TSC).</b> Name of the SmartBlock: _____ Serial number of the SmartBlock: _____ • 10 °C below ambient temperature (AT) ± _____ °C • 35 °C ± _____ °C • 75 °C ± _____ °C	(AT:.....)  ..... ..... .....		
OQ 4.1.2	SM chapter 10 and 11	<b>Temperature (TMC and TSC).</b> Name of the SmartBlock: _____ Serial number of the SmartBlock: _____ • 10 °C below ambient temperature (AT) ± _____ °C • 35 °C ± _____ °C • 75 °C ± _____ °C	(AT:.....)  ..... ..... .....		
OQ 4.1.3	SM chapter 10 and 11	<b>Temperature (TMC and TSC).</b> Name of the SmartBlock: _____ Serial number of the SmartBlock: _____ • 10 °C below ambient temperature (AT) ± _____ °C • 35 °C ± _____ °C • 75 °C ± _____ °C	(AT:.....)  ..... ..... .....		



No.	SM/OM section	Check	Measured value	Yes	No
OQ 4.2	SM chapter 10 and 11	<b>Temperature (TMFxx)</b> • 35 °C ± _____ °C • 75 °C ± _____ °C	..... .....		
OQ 5	SM chapter 10 and 11	<b>Speed (TMC and TMFxx)</b> • 1000 rpm ± 3 % (970 rpm – 1030 rpm) • 2000 rpm ± 3 % (1940 rpm – 2060 rpm) • 3000 rpm ± 3 % (2910 rpm – 3090 rpm)	..... ..... .....		
OQ 6	SM chapter 10 and 11	<b>Timer (TMC and TSC).</b> • 5 min ± 2 s	.....		

Remarks

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Appendices (e.g.: calibration certificates, Technician's certificates, .....):

1: \_\_\_\_\_

2: \_\_\_\_\_

3: \_\_\_\_\_

4: \_\_\_\_\_

5: \_\_\_\_\_

\_\_\_\_\_  
 City, date

\_\_\_\_\_  
 Technician's signature

\_\_\_\_\_  
 City, date

\_\_\_\_\_  
 User signature





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