

# DIN SPEC 91127:2011-06 (E)

## Recommendation for Temperature Calibration of Fast Scanning Calorimeters (FSCs) for Sample Mass and Scan Rate; Text in English

---

Inhalt	Seite
Foreword .....	3
Introduction.....	4
1 Scope .....	4
2 Normative references.....	4
3 Abbreviations and units.....	5
3.1 Abbreviations.....	5
3.2 Units.....	5
3.3 Convention .....	6
4 Fast Scanning Calorimetry (FSC) .....	6
4.1 General .....	6
4.2 DSCs .....	7
4.3 Chip Calorimeters.....	7
5 Temperature Calibration Protocol .....	8
5.1 FSC Performance (Annex A) .....	8
5.2 Primary Temperature Calibration (Annex B) .....	8
5.3 Check of the Primary Temperature Calibration.....	9
5.4 Temperature Calibration with Respect to Sample Mass and Scan Rate (Annex C) .....	9
5.5 Check of the Temperature Calibration for Sample Mass and Scan Rate (Annex C) .....	10
5.6 Symmetry (Annex D) .....	10
6 Calibration Protocol Flow Chart .....	12
Annex A (informative) Examples of Performance .....	13
A.1 HyperDSCs PerkinElmer.....	13
A.2 RHC TA Instruments .....	16
A.3 FSC Universität Rostock .....	17
A.4 Flash DSC 1 Mettler-Toledo.....	18
Annex B (normative) Primary Temperature Calibration .....	19
B.1 HyperDSCs PerkinElmer.....	19
B.2 RHC TA Instruments .....	20
Annex C (normative) Temperature Calibration with Respect to Sample Mass and Scan Rate .....	21
C.1 Suitable sample masses for various FSCs.....	21
C.2 HyperDSCs PerkinElmer.....	22
C.3 RHC TA Instruments .....	25
C.4 FSC Universität Rostock .....	27
C.5 Flash DSC 1 Mettler-Toledo.....	28
Annex D (normative) Symmetry .....	29
D.1 HyperDSCs PerkinElmer.....	29
D.2 RHC TA Instruments .....	32
D.3 FSC Universität Rostock .....	33
D.4 Flash DSC 1 Mettler-Toledo.....	34
Bibliography.....	36