

# DIN EN 17289-3:2021-02 (E)

## Characterization of bulk materials - Determination of a size-weighted fine fraction and crystalline silica content - Part 3: Sedimentation method

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
Introduction .....		5
1	Scope .....	7
2	Normative references .....	7
3	Terms and definitions .....	7
4	Symbols and abbreviations .....	7
5	Assumptions .....	8
6	Determination of SWFF and SWFFCS by sedimentation .....	10
6.1	Determination of sedimentation time .....	10
6.2	Selection of sedimentation liquid .....	10
6.3	Sample preparation, sedimentation and SWFF determination .....	11
6.4	Use of a dispersant or deflocculant .....	13
6.5	Determination of the SWFF and SWFFCS of mixtures of phases with different particle densities .....	13
6.6	SWFF of mixtures .....	13
6.7	SWFFCS of mixtures of homogeneous particles .....	13
6.8	SWFFCS of mixtures of heterogeneous particles .....	14
Annex A (normative) Separation of the SWFF by sedimentation .....		16
A.1	Derivation for calculating the sedimentation parameters .....	16
A.2	Calculation of the SWFF after sedimentation .....	20
Annex B (normative) Determination and isolation of the size-weighted fine fraction (SWFF) of kaolins and kaolinitic clays by sedimentation .....		22
B.1	General .....	22
B.2	Use range .....	22
B.3	Equipment and consumables .....	22
B.4	Method .....	23
B.5	Figures .....	25
Annex C (normative) Other minerals which can be treated in a similar way to kaolins/kaolinitic clays for SWFF and SWFFCS determination .....		28
C.1	General .....	28
C.2	Andalusite .....	28
C.3	Mica .....	29
C.4	Vermiculite .....	30
C.5	Talc .....	30
Annex D (normative) Determination of the size-weighted fine fraction (SWFF and SWFFCS) of Diatomaceous Earth (DE) by sedimentation .....		32

D.1	General .....	32
D.2	Categories of diatomaceous earth .....	32
D.3	Equipment and consumables .....	32
D.4	Method .....	32
D.5	Determination of SWFF by sedimentation .....	33
D.6	Determination of SWFFCS .....	33
D.7	Example .....	33
<b>Annex E (normative) Determination of the size-weighted fine fraction (SWFF) of feldspar products by sedimentation .....</b>		<b>35</b>
E.1	General .....	35
E.2	Use range .....	35
E.3	Consumables .....	35
E.4	Method .....	35
<b>Bibliography .....</b>		<b>40</b>