

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

Contents		Page
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
Annex E (normative) Determination of the size-weighted fine fraction (SWFF) of feldspar products by sedimentation		35
E.1	General	35
E.2	Use range	35
E.3	Consumables	35
E.4	Method	35
Bibliography		40