

DIN EN 71-7:2014-07 (E)

Safety of toys - Part 7: Finger paints - Requirements and test methods

Contents		Page
Foreword		4
Introduction		6
1	Scope	7
2	Normative references	7
3	Terms and definitions	7
4	Requirements	8
4.1	General	8
4.2	Colourants	8
4.3	Preservatives	9
4.4	Migration of certain elements	9
4.5	Limits for impurities	9
4.5.1	Limits for primary aromatic amines	9
4.5.2	Limits for other impurities	10
4.6	Taste and smell	10
4.7	pH-value	11
4.8	Binding agents, extenders, humectants and surfactants	11
4.9	N-Nitrosamines	11
4.10	Containers	11
5	Product information	11
5.1	General	11
5.2	Marking	11
5.2.1	Primary packaging	11
5.2.2	Container	12
D.1	General	24
D.2	Reagents	25
D.3	Apparatus	26
D.4	Instrumentation	26
D.5	Sampling procedure	26
D.6	Procedure	26
D.7	Calculation	35
D.8	Precision	36
D.8.1	Linearity	36
D.8.2	Limits of Detection (LOD) and Quantification (LOQ)	36
D.8.3	Repeatability and reproducibility data for soluble aromatic amines	37
D.8.4	Repeatability and reproducibility data for reductively cleaved aromatic amines	38
D.8.5	Recovery	39
D.9	Report	40
D.10	Additional Information	40
E.1	Principle	41
E.2	Standards, reagents and solvents	41
E.3	Apparatus	43
E.4	Instrumentation	43
E.5	Sampling	44
E.6	Procedure	44

E.6.1	General	44
E.6.2	Sample preparation	44
E.6.3	Solvent extraction	44
E.6.4	Solid phase extraction	45
E.6.5	Sample concentration for determining HCB and PCB congeners	45
E.6.6	Sample concentration for determining B[\square]P	45
E.6.7	Gas chromatography conditions	45
E.6.8	Mass spectrometry	46
E.6.9	SIM mode	46
E.7	Calculation	51
E.8	Precision	53
E.8.1	Linearity	53
E.8.2	Limits of detection (LOD) and Quantification (LOQ)	53
E.8.3	Repeatability and reproducibility data for HCB, PCB congeners and B[\square]P	53
E.8.4	Recovery	54
E.9	Report	54
E.10	Additional information	55
F.1	Finger paints (see 3.1 and 3.2)	59
F.2	Colourants (see 4.2.1)	59
F.3	Preservatives (see 4.3)	59
F.4	Elements (see 4.4)	59
F.5	Primary aromatic amines (see 4.5.1.2, Tables 1 and 2 and Annex D)	59
F.6	Limit for Benzo[\square]Pyrene (see 4.5.2)	60
F.7	Embittering agents (see 4.6)	60
F.8	pH value (see 4.7)	60
F.9	N-Nitrosamines (see 4.9)	60
F.10	Container (see 4.10)	60
F.11	Labelling phrases (see 5.2.1.2)	61
F.12	List of polychlorinated biphenyl congeners (see Annex E)	61
F.13	Reference materials (see Annex D and E)	61
F.14	PCB Analytical Method (see E.6)	61
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2009/48/EC		64
Bibliography		65