

DIN EN 71-7:2020-06 (E)

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

Contents		Page
European foreword		5
Introduction		7
1	Scope	8
2	Normative references	8
3	Terms and definitions	8
4	Requirements	9
4.1	General	9
4.2	Colourants	9
4.3	Preservatives	10
4.4	Migration of certain elements	10
4.5	Limits for impurities	10
4.5.1	Limits for primary aromatic amines	10
4.5.2	Limits for other impurities	11
4.6	Taste and smell	12
4.7	pH-value	12
4.8	Binding agents, extenders, humectants and surfactants	12
4.9	N-Nitrosamines	12
4.10	Containers	13
5	Product information	13
5.1	General	13
5.2	Marking	13
5.2.1	Primary packaging	13
5.2.2	Container	14
Annex A (informative) Non-exhaustive list of colourants which are commonly used in finger paints, and need to be in compliance with both the general and specified purity requirements		15
Annex B (normative) List of preservatives allowed for use in finger paints		21
Annex C (informative) Ingredients used in the manufacture of finger paints		26
Annex D (normative) Method for the detection of certain azo colourants and determination of free primary aromatic amines		28
D.1	General	28
D.2	Reagents	29
D.3	Apparatus	30
D.4	Instrumentation	30
D.5	Sampling procedure	30
D.6	Procedure	31
D.7	Calculation	40
D.8	Precision	41
D.8.1	Linearity	41
D.8.2	Limits of Detection (LOD) and Quantification (LOQ)	41
D.8.3	Repeatability and reproducibility data for soluble aromatic amines	42

D.8.4	Repeatability and reproducibility data for reductively cleaved aromatic amines	43
D.8.5	Recovery	44
D.9	Report	46
D.10	Additional Information	46
Annex E (normative)	Method for the determination of hexachlorobenzene, polychlorinated biphenyls and %benzo[a]pyrene&	47
E.1	Principle	47
E.2	Standards, reagents and solvents	47
E.3	Apparatus	49
E.4	Instrumentation	50
E.5	Sampling	50
E.6	Procedure	50
E.6.1	General	50
E.6.2	Sample preparation	50
E.6.3	Solvent extraction	50
E.6.4	Solid phase extraction	51
E.6.5	Sample concentration for determining HCB and PCB congeners	51
E.6.6	Sample concentration for determining B[α]P	51
E.6.7	Gas chromatography conditions	51
E.6.8	Mass spectrometry	52
E.6.9	SIM mode	52
E.7	Calculation	57
E.8	Precision	60
E.8.1	Linearity	60
E.8.2	Limits of detection (LOD) and Quantification (LOQ)	60
E.8.3	Repeatability and reproducibility data for HCB, PCB congeners and B[α]P	60
E.8.4	Recovery	61
E.9	Report	62
E.10	Additional information	62
Annex F (informative)	Rationale	66
F.1	Finger paints (see 3.1 and 3.2)	66
F.2	Colourants (see 4.2.1)	66
F.3	Preservatives (see 4.3)	66
F.4	Elements (see 4.4)	66
F.5	Primary aromatic amines (see 4.5.1.2, Tables 1 and 2 and Annex D)	66
N1)	F.6 Limit for %Benzo[a]Pyrene& (see 4.5.2)	67
F.7	Embittering agents (see 4.6)	67
F.8	pH value (see 4.7)	67
F.9	N-Nitrosamines (see 4.9)	67
F.10	Container (see 4.10)	68
F.11	Labelling phrases (see 5.2.1.2)	68
F.12	List of polychlorinated biphenyl congeners (see Annex E)	68
F.13	Reference materials (see Annex D and E)	68
F.14	PCB Analytical Method (see E.6)	69
Annex G (informative)	Significant technical changes between this European Standard and the previous version	70
Annex ZA (informative)	Relationship between this European Standard and the Essential Requirements of EU Directive 2009/48/EC	71
Bibliography	72