

DIN EN ISO 21148:2017-09 (E)

Cosmetics - Microbiology - General instructions for microbiological examination (ISO 21148:2017)

Contents		Page
	European foreword	4
	Foreword	5
	Introduction	6
1	Scope	7
2	Normative references	7
3	Terms and definitions	7
4	Premises	7
	4.1 Test areas.....	7
	4.2 Additional areas.....	8
	4.3 Location of the premises.....	8
	4.4 Equipping the premises.....	8
	4.5 Maintenance.....	9
5	Equipment	9
	5.1 General.....	9
	5.2 Microbiological cabinets.....	9
	5.3 Balances.....	9
	5.4 Homogenizer.....	10
	5.5 pH-meter.....	10
	5.6 Autoclave.....	10
	5.7 Incubator.....	10
	5.8 Water baths.....	10
	5.9 Refrigerator or cold-storage room.....	10
	5.10 Freezer.....	10
	5.11 Sterilizing oven.....	11
	5.12 Colony-counting device.....	11
	5.13 Other equipment.....	11
6	Strains of microorganisms	11
7	Personnel	12
	7.1 Competence.....	12
	7.2 Hygiene.....	12
8	Preparation of the apparatus and glassware	12
	8.1 Preparation.....	12
	8.2 Sterilization.....	12
	8.2.1 Sterilization by dry heat.....	12
	8.2.2 Sterilization by moist heat.....	13
	8.3 Disposable apparatus.....	13
	8.4 Management of clean apparatus and glassware.....	13
	8.5 Management of sterile apparatus and glassware.....	13
	8.6 Treatment of contaminated material.....	13
	8.7 Washing.....	13
9	Preparation and sterilization of culture media and reagents	14
	9.1 General.....	14
	9.2 Water.....	14
	9.3 Preparation of culture media.....	14

9.3.1	General.....	14
9.3.2	Rehydration.....	14
9.3.3	Measurement of pH.....	14
9.3.4	Dispensing.....	14
9.4	Sterilization.....	15
9.4.1	General.....	15
9.4.2	Sterilization by moist heat.....	15
9.4.3	Sterilization by filtration.....	15
9.5	Storage.....	15
9.5.1	General.....	15
9.5.2	Laboratory-prepared culture media and reagents.....	15
9.5.3	Ready-to-use culture media and reagents.....	16
9.6	Melting of agar culture media.....	16
9.7	Preparation of Petri dishes.....	16
10	Laboratory samples.....	16
10.1	General.....	16
10.2	Sampling the cosmetic product.....	16
10.3	Transport.....	16
10.4	Receipt and storage.....	17
10.5	Handling products and samples.....	17
10.6	Conservation and destruction of products.....	17
11	Operating practices.....	17
11.1	Hygienic precautions during the testing.....	17
11.2	Preparation of the initial suspension and of sample dilutions.....	18
11.2.1	General.....	18
11.2.2	Water-miscible product.....	18
11.2.3	Water-immiscible products.....	19
11.3	Counting methods.....	19
11.4	Detection methods.....	19
12	Expression of results.....	19
13	Neutralization of the antimicrobial properties of the product.....	19
Annex A	(informative) Basic identification techniques.....	20
Annex B	(informative) Basic techniques for counting and plating.....	25
Annex C	(informative) Preparation and calibration of inoculums.....	26
Bibliography	27