

ISO 21148:2017-06 (E)

Cosmetics - Microbiology - General instructions for microbiological examination

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

9.3	Preparation of culture media	8
9.3.1	General	8
9.3.2	Rehydration	8
9.3.3	Measurement of pH	8
9.3.4	Dispensing	8
9.4	Sterilization	9
9.4.1	General	9
9.4.2	Sterilization by moist heat	9
9.4.3	Sterilization by filtration	9
9.5	Storage	9
9.5.1	General	9
9.5.2	Laboratory-prepared culture media and reagents	9
9.5.3	Ready-to-use culture media and reagents	10
9.6	Melting of agar culture media	10
9.7	Preparation of Petri dishes	10
10	Laboratory samples	10
10.1	General	10
10.2	Sampling the cosmetic product	10
10.3	Transport	10
10.4	Receipt and storage	11
10.5	Handling products and samples	11
10.6	Conservation and destruction of products	11
11	Operating practices	11
11.1	Hygienic precautions during the testing	11
11.2	Preparation of the initial suspension and of sample dilutions	12
11.2.1	General	12
11.2.2	Water-miscible product	12
11.2.3	Water-immiscible products	13
11.3	Counting methods	13
11.4	Detection methods	13
12	Expression of results	13
13	Neutralization of the antimicrobial properties of the product	13
Annex A (informative)	Basic identification techniques	14
Annex B (informative)	Basic techniques for counting and plating	19
Annex C (informative)	Preparation and calibration of inoculums	20
Bibliography	21