# COMMISSION REGULATION (EC) No 1854/96

## of 26 September 1996

## establishing a list of reference methods to be applied for the analysis and quality evaluation of milk and milk products under the common market organization

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation No 804/68 of 27 June 1968 on the common organization of the market in milk and milk products [1], as last amended by Regulation (EC) No 1587/96 [2], and in particular Articles 6 (6), 7 (5), 8 (4), 9 (3), 10 (3), 11 (3), 12 (3), 13 (3), 16 (1) and (4), and 17 (14) thereof,

Whereas Article 2 (1) of Commission Regulation (EC) No 2721/95 of 24 November 1995 on the establishment of rules for the application of reference and routine methods for the analysis and quality evaluation of milk and milk products under the common market organization [3], specifies, that each year a list of reference methods applicable for the analyses mentioned in Article 1 of that Regulation has to be established; whereas a first list has been drawn up and should be adopted;

Whereas the measures provided for in this Regulation are in accordance with the opinion of the Management Committee for Milk and Milk Products,

HAS ADOPTED THIS REGULATION:

*Article 1*

The Annex to this Regulation contains the list of reference methods applicable to the analyses referred to in Article 1 of Commission Regulation (EC) No 2721/95.

*Article 2*

This Regulation shall enter into force on 1 October 1996.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 26 September 1996.

*For the Commission*

Franz FISCHLER

*Member of the Commission*

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[1] OJ No L 148, 28. 6. 1968, p. 13.
[2] OJ No L 206, 16. 8. 1996, p. 21.
[3] OJ No L 283, 25. 11. 1995, p. 7.

*ANNEX*

## LIST OF REFERENCE METHODS PURSUANT TO REGULATION (EC) No 2721/95

Applicable from 1 October 1996

*Index:*

Min. = minimum, Max. = maximum, Annex = Annex to quoted Regulation, SnF = solids not fat, r = repeatability, R = reproducibility, FFA = free fatty acids, PV = peroxide value, A = appearance, F = flavour, C = consistency, TBC = total bacterial count, Therm = thermophilic bacterial count, MS = Member State, IDF = International Dairy Federation, ISO = International Standards Organization, IUPAC = International Union of Pure and Applied Chemistry, ADPI = American Dairy Products Institute, SCM = Sweetened Condensed Milk, EMC = Evaporated Milk or Cream, MSNF = Milk Solids Non Fat, WC = Whey Cheese.

| Commission Regulation | Product | Parameter | Limit | Reference method | Remark |
|---|---|---|---|---|---|
| Regulation (EC) No 454/95 Annex I | Butter | Milk-Fat | 82 % Min. | IDF Standard 80:1977 | |
| | | Water | 16 % Max. | IDF Standard 80:1977 | |
| | | SnF | 2 % Max. | IDF Standard 80:1977 | |
| | | Fat acidity (Max.) | 1,2 mmol/100 g fat | IDF Standard 6B:1989 | |
| | | PV (Max.) | 0,3 mequiv. oxygen/1 000 g fat | ISO 3976:1977 | Note 1 |
| | | Coliform | not detectable in 1 g | Commission Regulation (EC) No 1080/96 (OJ No L 142, 15. 6. 1996, p. 13) | |
| | | non milk fat | not detectable by triglyceride analysis | Annex III | |
| | | Sterol tracers | not detectable | Commission Regulation (EC) No 86/94 (OJ No L 17, 20. 1. 1994, p. 7) | |
| | | Other tracers | not detectable | Methods approved by competent authority | Note 2 |
| | | Sensory characteristics | At least 4 out of 5 points for A, F, C | Annex IV | |
| | | Water dispersion | At least 4 points | IDF 112A:1989 | |
| Regulation (EEC) No 570/88 | Non-salted butter | Milk-Fat | 82 % Min. | IDF Standard 80:1977 | |
| | | Water | 16 % Max. | IDF Standard 80:1977 | |
| | | Tracers | | | |
| | | Sterols | | Regulation (EC) No 86/94 | |
| | | Vanillin | | Methods approved by competent authority | Note 2 |
| | | Carotenic acid ethyl ester | | Commission Regulation (EC) No 1082/96 (OJ No L 142, 15. 6. 1996, p. 26) | |
| | | Triglycerides of enanthic acid | | IUPAC 2.301 sub 5 | |

| Commission Regulation | Product | Parameter | Limit | Reference method | Remark |
|---|---|---|---|---|---|
| Regulation (EEC) No 570/88 | Salted butter | Milk-fat | 80 % Min. | IDF Standard 80:1977 | |
| | | Water | 16 % Max. | IDF Standard 80:1977 | |
| | | Tracers | | | |
| | | Sterols | | Commission Regulation (EC) No 86/94 | |
| | | Vanillin | | Methods approved by competent authority | Note 2 |
| | | Carotenic acid ethyl ester | | Regulation (EC) No 1082/96 | |
| | | Triglycerides of enanthic acid | | IUPAC 2.301 sub 5 | |
| Regulation (EEC) No 570/88 | Concentrated butter | Milk-fat | 99,8 % Min. | IDF Standard 24:1964 | |
| | | Moisture & MSNF | 0,2 % Max. | IDF 23A:1988 (moisture)<br>IDF 24:1964 (MSNF) | |
| | | Fat acidity | 0,35 % (oleic) Max. | IDF Standard 6B:1989 | |
| | | PV (Max.) | 0,5 mequiv. oxygen/1 000 g fat | ISO 3976:1977 | Note 1 |
| | | Flavour | Fresh | | |
| | | Smell | absence of extraneous odours | | |
| | | Other | Absence of neutralizing agents, antioxidants and preservatives | | |
| | | Tracers | | | |
| | | Sterols | | Regulation (EEC) No 3942/92 | |
| | | Vanillin | | Methods approved by competent authority | Note 2 |
| | | Carotenic acid ethyl ester | | Regulation (EC) No 1082/96 | |
| | | Triglycerides of enanthic acid | | IUPAC 2.301 sub 5 | |
| Regulation (EEC) No 570/88 | Cream | Fat | 35 % — 49 % | IDF Standard 16C:1987 | |
| | | Tracers | | | |
| | | Sterols | | Methods approved by competent authority | Note 2 |
| | | Vanillin | | Methods approved by competent authority | Note 2 |
| | | Carotenic acid ethyl ester | | Method approved by competent authority | Note 2 |
| | | Triglycerides of enanthic acid | | IUPAC 2.301 sub 5 | |

| Commission Regulation | Product | Parameter | Limit | Reference method | Remark |
|---|---|---|---|---|---|
| Regulation (EEC) No 429/90 | Concentrated butter | Milk-fat | 96 % | IDF Standard 24:1964 | |
| | | Snf | 2 % | IDF 80:1977 | |
| | | Tracers | | | |
| | | stigmasterol (95 %) | 15 g/100 butter concentrate | Commission Regulation (EEC) No 3942/92 (OJ No L 399, 31. 12. 1992, p. 29) | |
| | | stigmasterol (85 %) | 17 g/100 kg butter concentrate | Commission Regulation (EEC) No 3942/92 (OJ No L 399, 31. 12. 1992, p. 29) | |
| | | triglycerides of enanthic acid | 1,1 kg/100 kg butter concentrate | IUPAC 2.301 sub 5 | |
| | | ethyl ester of butyric acid and stigmasterol | see Annex point 1c. | Commission Regulation (EEC) No 3942/92 (stigmasterol) and method approved by competent authority (butyric acid) | |
| | | lecithin (E322) | 0,5 % Max. | Methods approved by competent authority | Note 2 |
| | | NaCl | 0,75 % Max. | IDF Standard 12B:1988 | |
| | | Fat acidity | 0,35 % (oleic) Max. | IDF Standard 6B:1989 | Note 2 |
| | | PV (Max.) | 0,5 mequiv. oxygen/1 000 g fat | ISO 3976:1977 | Note 1 |
| | | Flavour | Fresh | | |
| | | Smell | absence of extraneous odours | | |
| | | Other | absence of neutralizing agents, antioxidants and preservatives | | |
| Regulation (EEC) No 2191/81 | Non-salted butter | Milk fat | 82 % Min. | IDF Standard 80:1977 | |
| | | Water | 16 % Min. | IDF Standard 80:1977 | |
| Regulation (EEC) No 2191/81 | Salted butter | Milk fat | 80 % Min. | IDF Standard 80:1977 | |
| | | Water | 16 % Min. | IDF Standard 80:1977 | |
| | | Salt | 2 % Max. | IDF Standard 12B:1988 | |
| Regulation (EEC) No 2921/90 | Annex I — Acid Casein | Water | 12,00 % Max. | IDF Standard 78C:1990 | |
| | | Fat | 1,75 % Max. | IDF 127A:1988 | |
| | | Free acidity | 0,3 % (lactic) Max. | IDF Standard 91:1979 | |
| Regulation (EEC) No 2921/90 | Annex I — Rennet Casein | Water | 12,00 % Max. | IDF Standard 78C:1990 | |
| | | Fat | 1,00 % Max. | IDF 127A:1988 | |
| | | Ash | 7,50 % Min. | IDF Standard 90:1979 | |

| Commission Regulation | Product | Parameter | Limit | Reference method | Remark |
|---|---|---|---|---|---|
| Regulation (EEC) No 2921/90 | Annex I — Caseinate | Water | 6,00 % Max. | IDF Standard 78C:1990 | |
| | | Milk protein | 88,0 % Min. | IDF Standard 92:1979 | |
| | | Fat and ash | 6,00 % Max. | IDF 127A:1988<br>IDF Standard 89:1979 or IDF Standard 90:1979 | |
| Regulation (EEC) No 2921/90 | Annex II — Acid Casein | Water | 10 % Max. | IDF Standard FIL 78C:1990 | |
| | | Fat | 1,5 % Max. | IDF 127A:1988 | |
| | | Free acidity | 0,2 % (lactic) Max. | IDF Standard 91:1979 | |
| | | TBC (Max.) | 30 000/1 g | IDF Standard 100B:1991 | Note 3 |
| | | Coliforms (Max.) | absence/0,1 g | Regulation (EC) No 1080/96 | |
| | | Therm. (Max.) | 5 000/1 g | IDF Standard 100B:1991 | Note 3, 4 |
| Regulation (EEC) No 2921/90 | Annex II — Rennet Casein | Water | 8 % Max. | IDF Standard 78C:1990 | |
| | | Fat | 1,0 % Max. | IDF 127A:1988 | |
| | | Ash (Min.) | 7,5 % | IDF Standard 90:1979 | |
| | | TBC (Max.) | 30 000/1 g | IDF Standard 100B:1991 | Note 3 |
| | | Coliforms (Max.) | absence/0,1 g | Regulation (EC) No 1080/96 | |
| | | Therm. (Max.) | 5 000/1 g | IDF Standard 100B:1991 | Note 3, 4 |
| Regulation (EEC) No 2921/90 | Annex II — Caseinate | Water | 6,00 % Max. | IDF Standard 78C:1990 | |
| | | Milk Protein | 88,0 % Min. | IDF Standard 92:1979 | |
| | | Fat and ash | 6,00 % Max. | IDF 127A:1988<br>IDF 89:1979 or IDF 90:1979 | |
| | | TBC (Max.) | 30 000/1 g | IDF Standard 100B:1991 | Note 3 |
| | | Coliforms (Max.) | absence/0,1 g | Commission Regulation (EC) No 1080/96 | |
| | | Therms (Max.) | 5 000/1 g | IDF Standard 100B:1991 | Note 3, 4 |
| Regulation (EEC) No 2921/90 | Annex III — Caseinate | Water | 6,00 % Max. | IDF Standard 78C:1990 | |
| | | Milk protein | 85,00 % Min. | IDF Standard 92:1979 | |
| | | Fat | 1,5 % Max. | IDF 127A:1988 | |
| | | Lactose | 1,00 % Max. | IDF Standard 106:1982 | |
| | | Ash | 6,5 % Max. | IDF 89:1979 or IDF 90:1979 | |
| | | TBC (Max.) | 30 000/1 g | IDF Standard 100B:1991 | Note 3 |
| | | Coliforms (Max.) | absence/0,1 g | Regulation (EC) No 1080/96 | |
| | | Therm. (Max.) | 5 000/1 g | IDF Standard 100B:1991 | Note 3, 4 |

| Commission Regulation | Product | Parameter | Limit | Reference method | Remark |
|---|---|---|---|---|---|
| Regulation (EEC) No 1725/79 | Compound feedingstuffs & SMP (animal grade) | Water (acid buttermilk powder) | 5 % Max. | Annex VI | |
| | | Water (SMP) | 5 % Max. | IDF Standard 26A:1993 | |
| | | Fat (SMP) | 11 % Max. | IDF Standard 9C:1987 | |
| | | SMP content Final Product | 50 % Min. | Annex III | |
| | | Fatty matter Final Product | 2,5 % or 5 % Min. | Directive 84/4/EEC (OJ No L 15, 18. 1. 1984, p. 28) | |
| | | Copper Final Product | 25 ppm | Directive 78/633/EEC (OJ No L 206, 29. 7. 1978, p. 43) | |
| | | Starch Final Product | ≥ 2 % | Annex V | |
| | | Rennet Whey Final Product | Absence | Annex IV | |
| Regulation (EC) No 322/96 | SMP spray | Fat | 1,0 % Max. | IDF Standard 9C:1987 | |
| | | Protein | 31,4 % (Min. of the non-fat dry matter) | IDF Standard 20B:1993 | |
| | | Water | 3,5 % Max. | IDF Standard 26A:1993 | |
| | | Acidity (N/10 NaOH) | 19,5 mls Max. | IDF Standard 86:1981 | |
| | | Lactates | 150 mg/100 g Max. | IDF Standard 69B:1987 | |
| | | Phosphatase | negative | ISO Standard 3356:1975 | |
| | | Solubility | 0,5 ml Max. at 24 °C | IDF 129A:1988 | |
| | | Scorched Particles | disk B Min. (15,0 mg) | ADPI:1990 | |
| | | TBC | 40 000/1 g | IDF Standard 100B:1991 | |
| | | Coliform | negative/0,1 g | Regulation (EC) No 1080/96 | |
| | | Buttermilk | negative | Annex VI | |
| | | Whey — Rennet | negative | Annex V | |
| | | Whey — Acid | negative | Method approved by competent authority | |
| | | Antimicrobial agents | | Annex VII | |
| Regulation (EEC) No 1081/96 | Cheese made from ewes' milk | Cows' milk | < 1 % | Regulation (EC) No 1081/96 (OJ No L 142, 15. 6. 1996, p. 15) | |

| Commission Regulation | Product | CN code | Parameter | Limit | Reference method | Remark |
|---|---|---|---|---|---|---|
| | Milk and cream, not concentrated nor sweetened | CN code 0401 | Fat (≤ 6 %)<br>Fat (> 6 %) | | IDF Standard 1C:1987<br>IDF Standard 16C:1987 | |
| | Milk and cream, concentrated or containing added sugar | CN code 0402 | Fat (liquid form)<br>Fat (solid form)<br>Sucrose<br>Total solids (SCM)<br>Total solids (EMC) | | IDF Standard 13C:1987<br>IDF Standard 9C:1993<br>IDF Standard 35A:1992<br>IDF Standard 15B:1991<br>IDF Standard 21B:1987 | |
| Regulation (EC) No 1466/95<br>Regulation (EC) No 1600/95 | Buttermilk, fermented or acidified milk and cream, concentrated or unconcentrated containing added sugar | CN code 0403 | Fat<br>Sucrose | As specified in the description to the CN code for the particular product. | IDF 1C:1987, IDF 9C:1987<br>IDF 16C:1987, IDF 22B:1987<br>IDF Standard 35A:1992 | |
| Regulation (EEC) No 584/92<br>Regulation (EC) No 1588/94 | Whey, whether or not concentrated or sweetened; products consisting of natural milk constituents | CN code 0404 | Fat<br>Protein<br>Sucrose | As specified in Part 9 of the export refund nomenclature in Regulation 3846/87 as amended | IDF 9C:1987, IDF 16C:1987<br>IDF 22B:1987<br>IDF Standard 20B:1993<br>IDF Standard 35A:1992 | |
| Regulation (EC) No 1713/95 | Butter and other fats derived from milk; dairy spreads | CN code 0405<br>Butter<br>Butteroil | Fat (if fat ≤ 85 %)<br>Water<br>Solids not fat<br>NaCl<br>Fat (fat > 99 %)<br>Water (if fat > 99 %) | | IDF Standard 80:1977<br>IDF Standard 80:1977<br>IDF Standard 80:1977<br>IDF Standard 12B:1988<br>IDF Standard 24:1964<br>IDF Standard 23A:1988 | |
| Regulation (EEC) No 1150/90 | Cheese and curd | CN code 0406 | Fat<br>Dry matter<br>Dry matter (Ricotta)<br>NaCl<br>Lactose | | IDF Standard 5B:1986<br>IDF Standard 4A:1982<br>IDF Standard 58:1970<br>IDF Standard 88A:1988<br>IDF Standard 79B:1991 | |

**Notes to list of European Union reference methods**

Note 1: Milk fat isolation as described in IDF Standard 6B:1989 (protection from light).

Note 2: No reference method has been established.

Note 3: Sample preparation to be carried out according to IDF Standard 122B:1992 or according to IDF Standard 73A:1985.

Note 4: Incubation for 48 hours at a temperature of 55 °C.