

# هيئة التقييس لدول مجلس التعاون لدول الخليج العربية GCC STANDARDIZATION ORGANIZATION (GSO)

مشروع مواصفة نهائي  
Final Draft of Standard FDS

إعداد اللجنة الخليجية رقم TC05

Prepared by GSO Technical Committee No. TC05

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القشدة والقشدة المحضرة  
Cream, prepared creams

ICS: 67.100.99

This document is a draft Gulf Standard/Technical Regulation circulated for comments. It is, therefore, subject to alteration and modification and may not be referred to as a Gulf Standard/Technical Regulation until approved by GSO.

هذه الوثيقة مشروع لمواصفة قياسية/لائحة فنية خليجية تم توزيعها لإبداء الملحوظات بشأنها، لذلك فإنها عرضة للتغيير والتبديل، ولا يجوز الرجوع إليها كمواصفة قياسية/لائحة فنية خليجية إلا بعد اعتمادها من الهيئة.

## Foreword

The Gulf Cooperation Council Standardization Organization for the Arab States of the Gulf is a regional body whose membership includes national standardization bodies in member countries. One of the tasks of the organization is to prepare Gulf standards and technical regulations by specialized technical committees.

The Board of Directors of the Gulf Cooperation Council Standardization Organization decided in its meeting No. () held on // AH, corresponding to / / AD to approve the update of the Gulf Technical Regulations(GSO 05 /FDS/ 651:2020) specification of Cream, prepared creams in the language (Arabic and English) with technical adjustments made to it within a work program Gulf Technical Committee No. TC05 "Gulf Technical Committee for Food and Agricultural Specifications" included in the plan of the State of Kuwait.

The text (English) is considered the main reference in the event of a difference between the two texts.

## تقديم

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية هيئة إقليمية تضم في عضويتها أجهزة التقييس الوطنية في الدول الأعضاء، ومن مهام الهيئة إعداد المواصفات القياسية واللوائح الفنية الخليجية بواسطة لجان فنية متخصصة.

قرر (المجلس الفني ل/ مجلس إدارة) هيئة التقييس لدول مجلس التعاون لدول الخليج العربية في اجتماعه رقم ( ) الذي عقد بتاريخ / / هـ ، الموافق / / م اعتماد تحديث اللائحة الفنية الخليجية رقم ( GSO 651/2008 ) مواصفة القشدة والقشدة المحضرة باللغة العربية (العربية والانجليزية) رقم GSO 05/FDS/651:2020 ، ضمن برنامج عمل اللجنة الفنية الخليجية رقم TC05 "اللجنة الفنية الخليجية للمواصفات الغذائية والزراعية" المدرجة في خطة دولة الكويت. ويعتبر النص (الإنجليزي) هو المرجع الأساسي في حال وجود اختلاف بين النصين.

## 1 SCOPE

This Standard applies to cream and prepared creams for direct consumption or further processing as defined in Section 3 of this Standard.

## 2 REFERENCES

- 2.1 GSO 9 "Labeling of prepackaged food stuffs"
- 2.2 GSO 21 "Hygienic regulations for food plants and their personnel"
- 2.3 GSO 569 " Methods for sampling milk and milk products".
- 2.4 GSO 332 " Methods of test for cow milk cream, butters and cheese ( saman )".
- 2.5 GSO 150 " Expiration dates for food products -Part 1: Mandatory expiration dates."
- 2.6 GSO 1794 "the two-piece steel round cans used for canning food-stuffs"
- 2.7 GSO 148 " sugar"
- 2.8 GSO 1016 " Microbiological Criteria for Foodstuffs"
- 2.9 GSO 988 " Limits of radioactivity levels permitted in foods stuff part - 1."
- 2.10 GSO 382 "Maximum limits for pesticide residues in agricultural food products - Part 1".
- 2.11 GSO 383 " Maximum limits for pesticide residues in agricultural food products - Part 2"
- 2.12 GSO 841 "Maximum limits of mycotoxins permitted in foods and animal feeds– aflatoxins."

## 3 DESCRIPTION

### 3.1 Cream

is the fluid<sup>1</sup> milk product comparatively rich in fat, in the form of an emulsion of fat-in-skimmed milk, obtained by physical separation from milk.

### 3.2 Reconstituted cream

is cream obtained by reconstituting milk products with or without the addition of potable water and with the same end product characteristics as the product described in Section 3.1.

<sup>1</sup> Fluid means capable of pouning at temperatures above freezing

### 3.3 Recombined cream

is cream obtained by recombining milk products with or without the addition of potable water and with the same end product characteristics as the product described in Section 3.1.

### 3.4 Prepared creams

are the milk products obtained by subjecting cream, reconstituted cream and/or recombined cream to suitable treatments and processes to obtain the characteristic properties as specified below.

- 3.4.1 Prepackaged liquid cream is the fluid<sup>1</sup> milk product obtained by preparing and packaging cream, reconstituted cream and/or recombined cream for direct consumption and/or for direct use as such.
- 3.4.2 Whipping cream is the fluid<sup>1</sup> cream, reconstituted cream and/or recombined cream that is intended for whipping. When cream is intended for use by the final consumer the cream should have been prepared in a way that facilitates the whipping process.
- 3.4.3 Cream packed under pressure is the fluid<sup>1</sup> cream, reconstituted cream and/or recombined cream that is packed with a propellant gas in a pressure-propulsion container and which becomes Whipped Cream when removed from that container.
- 3.4.4 Whipped cream is the fluid<sup>1</sup> cream, reconstituted cream and/or recombined cream into which air or inert gas has been incorporated without reversing the fat-in-skimmed milk emulsion.
- 3.4.5 Fermented cream is the milk product obtained by fermentation of cream, reconstituted cream or recombined cream, by the action of suitable micro-organisms, that results in reduction of pH with or without coagulation. Where the content of (a) specific micro-organism(s) is(are) indicated, directly or indirectly, in the labelling or otherwise indicated by content claims in connection with sale, these shall be present, viable, active and abundant in the product to the date of minimum durability. If the product is heat-treated after fermentation the requirement for viable micro-organisms does not apply.

**3.4.6** Acidified cream is the milk product obtained by acidifying cream, reconstituted cream and/or recombined cream by the action of acids and/or acidity regulators to achieve a reduction of pH with or without coagulation.

## **4 ESSENTIAL COMPOSITION AND QUALITY FACTORS**

### **4.1 Raw materials**

All creams and prepared creams:

Milk, which may have been subjected to mechanical and physical treatments prior to cream processing.

Additionally, for creams made by reconstitution or recombination:

Butter<sup>2</sup>, milk fat products<sup>2</sup>, milk powders<sup>2</sup>, cream powders<sup>2</sup>, and potable water. Additionally, for prepared creams described in Section 3.4.2 through to Section 3.4.6:

The product that remains after the removal of milk fat by churning milk and cream to manufacture butter and milk fat products (often referred to as buttermilk) and that may have been concentrated and/or dried.

### **4.2 Permitted ingredients**

Only those ingredients listed below may be used for the purposes and product categories specified, and only within the limitations specified.

For use in products only for which stabilizers and/or thickeners are justified (see table in Section 5): – Products derived exclusively from milk or whey and containing 35% (m/m) or more of milk protein of any type (including casein and whey protein products and concentrates and any combinations thereof) and milk powders: These products can be used in the same function as thickeners and stabilizers, provided they are added only in amounts functionally necessary not exceeding 20 g/kg, taking into account any use of the stabilizers and thickeners listed in Section 5.

– Gelatin and starch: These substances can be used in the same function as stabilizers, provided they are added only in amounts functionally necessary as governed by Good Manufacturing Practice considering any use of the stabilizers/thickeners listed in section 5.

<sup>2</sup> For specification, see relevant Gulf Standard

Additionally, for use in fermented cream, only:

- Starter cultures of harmless micro-organisms including those specified in of the Standard for Fermented Milks in section 2.8.

Additionally, for use in fermented cream and acidified cream, only:

– Rennet and other safe and suitable coagulating enzymes to improve texture without achieving enzymatic coagulation.

– Sodium chloride.

### 4.3 Composition

Milk fat: Minimum 10% (w/w)

Compositional modification below the minimum specified above for milk fat is not considered to follow the General Standard for the Use of Dairy.

## 5 FOOD ADDITIVES

**5.1** Its allowed to add honey , sugar, fruit or fruit juice, natural and artificial flavors with or without colors , according to the related standards.

**5.2** Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those additives listed below may be used and only within the limits specified. Stabilizers and thickeners, including modified starches may be used singly or in combination, in compliance with the definitions for milk products and only to the extent that they are functionally necessary, considering any use of gelatin and starch as provided for in Section 4.2.

| Product category                     | Additive functional class |                       |                                  |                               |
|--------------------------------------|---------------------------|-----------------------|----------------------------------|-------------------------------|
|                                      | Stabilizers(a)            | Acidity regulators(a) | Thickeners(a) and emulsifiers(a) | Packing gases and propellants |
| Prepackaged liquid cream (2.4.1):    | x                         | x                     | x                                | -                             |
| Whipping cream (2.4.2):              | x                         | x                     | x                                | -                             |
| Cream packed under pressure (2.4.3): | x                         | x                     | x                                | x                             |

|                          |   |   |   |   |
|--------------------------|---|---|---|---|
| Whipped cream (2.4.4):   | x | x | x | x |
| Fermented cream (2.4.5): | x | x | x | - |
| Acidified cream (2.4.6): | x | x | x | - |

(a) These additives may be used when needed to ensure product stability and integrity of the emulsion, taking into consideration the fat content and durability of the product. About the durability, special consideration should be given to the level of heat treatment applied since some minimally pasteurized products do not require the use of certain additives.

X The use of additives belonging to the class is technologically justified.

- The use of additives belonging to the class is not technologically justified.

| INS no.                           | Name of additive                | Maximum level |
|-----------------------------------|---------------------------------|---------------|
| <b>Acidity Regulators</b>         |                                 |               |
| 270                               | Lactic acid, L-, D- and DL-     | GMP           |
| 325                               | Sodium lactate                  | GMP           |
| 326                               | Potassium lactate               | GMP           |
| 327                               | Calcium lactate                 | GMP           |
| 330                               | Citric acid                     | GMP           |
| 333                               | Calcium citrates                | GMP           |
| 500(i)                            | Sodium carbonate                | GMP           |
| 500(ii)                           | Sodium hydrogen carbonate       | GMP           |
| 500(iii)                          | Sodium sesquicarbonate          | GMP           |
| 501(i)                            | Potassium carbonate             | GMP           |
| 501(ii)                           | Potassium hydrogen carbonate    | GMP           |
| <b>Stabilizers and thickeners</b> |                                 |               |
| 170(i)                            | Calcium carbonate               | GMP           |
| 331(i)                            | Sodium dihydrogen citrate       | GMP           |
| 331(iii)                          | Trisodium citrate               | GMP           |
| 332(i)                            | Potassium dihydrogen citrate    | GMP           |
| 332(ii)                           | Tripotassium citrate            | GMP           |
| 516                               | Calcium sulphate                | GMP           |
| 339(i)                            | Monosodium dihydrogen phosphate |               |
| 339(ii)                           | Disodium hydrogen phosphate     |               |
| 339(iii)                          | Trisodium phosphate             |               |



|          |  |  |
|----------|--|--|
| 340(i)   | Potassium dihydrogen phosphate             | 1100 mg/kg<br>expressed as<br>phosphorus |
| 340(ii)  | Dipotassium hydrogen phosphate             |  |
| 340(iii) | Tripotassium phosphate                     |  |
| 341(i)   | Calcium dihydrogen phosphate               |  |
| 341(ii)  | Calcium hydrogen phosphate                 |  |
| 341(iii) | Tricalcium phosphate                       |  |
| 450(i)   | Disodium diphosphate                       |  |
| 450(ii)  | Trisodium diphosphate                      |  |
| 450(iii) | Tetrasodium diphosphate                    |  |
| 450(v)   | Tetrapotassium diphosphate                 |  |
| 450(vi)  | Calcium diphosphate                        |  |
| 450(vii) | Calcium dihydrogen diphosphate             |  |
| 451(i)   | Pentasodium triphosphate                   |  |
| 451(ii)  | Pentapotassium triphosphate                |  |
| 452(i)   | Sodium polyphosphate                       |  |
| 452(ii)  | Potassium polyphosphate                    |  |
| 452(iii) | Sodium calcium polyphosphate               |  |
| 452(iv)  | Calcium polyphosphate                      |  |
| 452(v)   | Ammonium polyphosphate                     |  |
| 400      | Alginic acid                               | GMP                                      |
| 401      | Sodium alginate                            | GMP                                      |
| 402      | Potassium alginate                         | GMP                                      |
| 403      | Ammonium alginate                          | GMP                                      |
| 404      | Calcium alginate                           | GMP                                      |
| 405      | Propylene glycol alginate                  | 5000 mg/kg                               |
| 406      | Agar                                       | GMP                                      |
| 407      | Carrageenan                                | GMP                                      |
| 407a     | Processed eucheama seaweed (PES)           | GMP                                      |
| 410      | Carob bean gum                             | GMP                                      |
| 412      | Guar gum                                   | GMP                                      |
| 414      | Gum arabic (Acacia gum)                    | GMP                                      |
| 415      | Xanthan gum                                | GMP                                      |
| 418      | Gellan gum                                 | GMP                                      |
| 440      | Pectins                                    | GMP                                      |
| 460(i)   | Microcrystalline cellulose (Cellulose gel) | GMP                                      |
| 460(ii)  | Powdered cellulose                         | GMP                                      |
| 461      | Methyl cellulose                           | GMP                                      |
| 463      | Hydroxypropyl cellulose                    | GMP                                      |
| 464      | Hydroxypropyl methyl cellulose             | GMP                                      |

|               |  |            |
|---------------|--|------------|
| 465           | Methyl ethyl cellulose                             | GMP        |
| 466           | Sodium carboxymethyl cellulose (Cellulose gum)     | GMP        |
| 472e          | Diacetyltartaric and fatty acid esters of glycerol | 5000 mg/kg |
| 508           | Potassium chloride                                 | GMP        |
| 509           | Calcium chloride                                   | GMP        |
| 1410          | Monostarch phosphate                               | GMP        |
| 1412          | Distarch phosphate                                 | GMP        |
| 1413          | Phosphated distarch phosphate                      | GMP        |
| 1414          | Acetylated distarch phosphate                      | GMP        |
| 1420          | Starch acetate                                     | GMP        |
| 1422          | Acetylated distarch adipate                        | GMP        |
| 1440          | Hydroxypropyl starch                               | GMP        |
| 1442          | Hydroxypropyl distarch phosphate                   | GMP        |
| 1450          | Starch sodium octenyl succinate                    | GMP        |
| Emulsifiers   |  |            |
| 322(i)        | Lecithin   | GMP        |
| 432           | Polyoxyethylene (20) sorbitan monolaurate          | 1000 mg/kg |
| 433           | Polyoxyethylene (20) sorbitan monooleate           |            |
| 434           | Polyoxyethylene (20) sorbitan monopalmitate        |            |
| 435           | Polyoxyethylene (20) sorbitan monostearate         |            |
| 436           | Polyoxyethylene (20) sorbitan tristearate          |            |
| 471           | Mono- and diglycerides of fatty acids              | GMP        |
| 472a          | Acetic and fatty acid esters of glycerol           | GMP        |
| 472b          | Lactic and fatty acid esters of glycerol           | GMP        |
| 472c          | Citric and fatty acid esters of glycerol           | GMP        |
| 473           | Sucrose esters of fatty acids                      | 5000 mg/kg |
| 475           | Polyglycerol esters of fatty acids                 | 6000 mg/kg |
| 491           | Sorbitan monostearate                              | 5000 mg/kg |
| 492           | Sorbitan tristearate                               |            |
| 493           | Sorbitan monolaurate                               |            |
| 494           | Sorbitan monooleate                                |            |
| 495           | Sorbitan monopalmitate                             |            |
| Packing gases |  |            |
| 290           | Carbon dioxide                                     | GMP        |
| 941           | Nitrogen   | GMP        |
| Propellant    |  |            |
| 942           | Nitrous oxide                                      | GMP        |

## 6 CONTAMINANTS

The products covered by this Standard shall comply with the maximum levels for contaminants that are specified for the product in the General Standard for Contaminants and Toxins in Food and Feed mentioned in section 2.12.

The milk used in the manufacture of the products covered by this Standard shall comply with the maximum levels for contaminants and toxins specified for milk by the General Standard for Contaminants and Toxins in Food and Feed and with the maximum residue limits for veterinary drug residues and pesticides established for milk in section 2.12.

## 7 HYGIENE

It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the General Principles of Food Hygiene, In section 2.2. The products should comply with any microbiological criteria established in accordance with the Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Food, in section 2.8.

## 8 LABELLING

In addition to the provisions of the General Standard for the Labelling of Prepackaged Foods , in section 2.1 and the General Standard for the Use of Dairy Terms in section 2.4, the following specific provisions apply.

### 8.1 Name of the food

- 8.1.1** The name of the food shall be as specified in Section 3 of this Standard, However, “prepackaged liquid cream” may be designated as “cream” and “cream packed under pressure” may be designated by another descriptive term that refers to its nature or intended use or as “Whipped Cream”. The term “prepared cream” should not apply as a designation. The products covered by this Standard may alternatively be designated with other names specified in the national legislation of the country in which the product is manufactured and/or sold or with a name existing by common usage, provided that such designations do not create an erroneous impression in the country of retail sale regarding the character and identity of the food. In addition, labelling statements, such as product designation of fermented creams and content claims, may include reference to the terms “Acidophilus”, “Kefir”, and “Kumys”, as appropriate, provided that the product has been fermented by the corresponding specific starter culture(s) specified in Section 2.1 of the Standard for Fermented Milks (CXS 243-2003), and provided that the product complies with those compositional microbiological criteria that are applicable to the corresponding fermented milk as specified in Section 3.3 of that Standard.
- 8.1.2** The designation shall be accompanied by an indication of the fat content that is acceptable in the country of retail sale, either as a numerical value or by a suitable qualifying term, either as part of the name or in a prominent position in the same field of vision. Nutrition claims,. For this purpose, only, the level of 30% milk fat constitutes the reference.
- 8.1.3** Creams which have been manufactured by the recombination or reconstitution of dairy ingredients as specified in Sections 3.2 and 3.3 shall be labelled as “Recombined cream” or “Reconstituted cream” or another truthful qualifying term if the consumer would be misled by the absence of such labelling.
- 8.1.4** An appropriate description of the heat treatment should be given, either as part of the name or in a prominent position in the same field of vision, if the consumer would be misled by the absence of such labelling.

### **8.2 Declaration of milk fat content**

The milk fat content shall be declared in a manner acceptable in the country of sale to the final consumer, either as (i) a percentage of mass or volume, (ii) in grams per serving as qualified in the label, provided that the number of servings is stated. Where the fat content of the product is indicated by a numerical value in accordance with Section 8.1.2, such indication may constitute the fat declaration, provided that the indication includes any additional information as required above.

### **8.3 Labelling of non-retail containers**

Information required in Section 8 of this Standard and Sections 4.1 to 4.8 of the General Standard for the Labelling of Prepackaged Foods in section 2.1, and, if necessary, storage instructions, shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer or packer shall appear on the container. However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

## **9 METHODS OF SAMPLING AND ANALYSIS**

For checking the compliance with this Standard, the methods of analysis and sampling contained in the Recommended Methods of Analysis and Sampling, in section 2.3.