## TECHNICAL FILE SETTING OUT THE SPECIFICATIONS WITH WHICH IRISH CREAM MUST COMPLY

Food Industry Development Division Department of Agriculture, Food and the Marine

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1. NAME AND CATEGORY OF SPIRIT DRINK INCLUDING THE GEOGRAPHICAL INDICATION:

#### 1.1. NAME:

Irish Cream

#### 1.2. **CATEGORY OF SPIRIT DRINK:**

Liqueur (category 32 in Annex II to Regulation (EC) No 110/2008)

#### 1.3 **DESCRIPTION OF IRISH CREAM:**

Blend of fresh Irish dairy cream in a flavoured/sweetened alcohol base containing Irish Whiskey and other permitted ingredients.

#### 1.4 **GEOGRAPHICAL INDICATION TYPE:**

Protected Geographical Indication (PGI)

# 2. DESCRIPTION OF THE SPIRIT DRINK INCLUDING PRINCIPAL PHYSICAL, CHEMICAL AND ORGANOLEPTIC CHARACTERISTICS OF THE PRODUCT

#### 2.1. **PRODUCT SPECIFICATION:**

Irish Cream is a spirit drink with a minimum alcohol by volume of 15% v/v. They are only produced on the island of Ireland including Northern Ireland and consist of stable emulsions of fresh Irish dairy cream in a flavoured and sweetened alcohol base, and which contain Irish whiskey as defined by the Irish Whiskey Act, 1980 and its amendments and the technical file under Regulation (EC) No 110/2008.

#### 2.2. **APPEARANCE:**

The spirit drink is cream coloured and its hue can vary depending on specific flavours and ingredients. The product has a homogenous and smooth consistency providing a stable emulsion without appearances of physical instability during its commercial shelf-life.

The dairy cream in addition to the process of homogenisation of the cream liqueur, which occurs during production, confers a smooth texture and perceptibly pleasant mouth-feel whilst, on imbibing, the gradual melting of the butter-fat over time delivers a progressive release of the flavour compounds present and improves sensory perceptions during consumption.

#### 2.3. **COMPOSITIONAL STANDARDS:**

### **2.3.1. DAIRY CONTENT:**

Irish Cream liqueur shall contain a minimum of 10% milk fat when measured on a weight/volume basis in the final product. The milk fat content in Irish Cream liqueur shall consist of fresh Irish dairy cream produced on the island of Ireland including Northern Ireland from Irish milk obtained on the island of Ireland including Northern Ireland and which complies with Council Regulation 2597/97 as amended. Cream means that part of the cow's milk which is rich in fat, and which has been separated by skimming or otherwise and obtained from milk. It shall be pasteurised but shall not be sterilised, UHT treated or frozen.

#### 2.3.2. Alcohol Content:

The minimum alcoholic strength of Irish Cream is 15% v/v which is obtained by the use of ethyl alcohol of agricultural origin or from distillates of agricultural origin. A portion of the final alcohol content will arise by reason of the presence of Irish whiskey and additionally any alcohol of agricultural origin present in the flavours used in the production of Irish Cream.

#### 2.3.3. IRISH WHISKEY CONTENT:

The alcohol content of Irish Cream shall contain a minimum of 1% of Irish Whiskey. Such whiskey must comply with the requirements specified in the Irish Whiskey Act, 1980 and any subsequent amendments and the technical file under Regulation No 110/2008.

#### 2.3.4. <u>Sweetening / Sugar Use:</u>

Irish Cream has a minimum sugar content, expressed as invert sugar, of 100 grams per litre. This sugar can be in the form of any one or any combination of more than one sweetener as permitted in Annex I of Regulation 110/2008.

#### 2.3.5. OTHER INGREDIENTS:

The flavours, emulsifiers, stabilisers, chelating agents and colours contained in the product shall be those permitted for use in food or alcoholic beverages by legislation.

#### 2.3.6. FINAL COMPOSITION:

The final product shall embrace the characteristics, taste and properties of Irish Cream Liqueur. Irish Cream Liqueur cannot be produced in concentrated form for future reconstitution in a secondary location off the island of Ireland.

#### 3. DEFINITION OF THE GEOGRAPHICAL AREA CONCERNED:

Production of Irish Cream must take place in the geographical area of the island of Ireland.



#### 4. THE METHOD FOR OBTAINING THE SPIRIT DRINK:

Irish cream consists of a mixture of fresh Irish dairy cream, alcohol, together with sugar and/or honey or other carbohydrates substances and possible addition of flavourings and other ingredients and contains Irish Whiskey. The levels and percentage of each ingredient present may vary, thus contributing to brand individuality.

There are two methods for the production of Irish Cream.

#### 4.1. <u>Method 1 – 'Single Stage':</u>

- i. Initial spirit premix preparation includes the combining of alcohol, carbohydrates, water and also usually flavourings and colourings;
- ii. Second premix sometimes termed a 'protein premix', is prepared by:
  - a) Dissolving citric acid (or its salt) and dairy protein and/or other natural proteins, in water. Further emulsifiers may be added to better reinforce the dairy emulsifier.
  - b) Mixing this thoroughly with Irish dairy cream.
- iii. The product mixture is finally prepared by mixing the initial spirit premix with the second/protein premix.

iv. The complete product mixture is homogenised so that the average particle size of the cream globule is reduced to less than 5 microns, preferably less than 2 microns.

The addition of dairy protein and/or other natural proteins, which together act as emulsifiers to the dairy cream, is an essential part of the production process as effective emulsification imparts shelf life to Irish Cream by protecting the dairy cream from the otherwise adverse effects of the alcohol present.

#### 4.2. <u>METHOD 2 – 'TWO STAGE PROCESS':</u>

- i. A protein premix, is prepared by:
  - a) Dissolving citric acid (or its salt) and dairy protein, and/or other natural proteins, in water. Further emulsifiers may be added to better reinforce the dairy emulsifier.
  - b) Mixing this thoroughly with Irish dairy cream.
- ii. The mixture is homogenised so that the average particle size of the cream globule is reduced to less than 5 microns, preferably less than 2 microns.
- iii. The spirit premix is prepared and includes the combining of alcohol, carbohydrates, water, and also usually flavourings and colourings.
- iv. The spirit premix is subsequently added to the homogenised mixture outlined in point ii above.

#### 4.3. <u>DIFFERENCE BETWEEN THE TWO METHODS:</u>

The difference in the two processes consequently lies in the fact that in the single stage process all ingredients are homogenized while, in the two stage process, only the dairy and emulsified portions are homogenised.

Both processes outlined above are designed to ensure effective emulsification of the milk fat globule and the subsequent reduction of the emulsified milk fat globule particle size to ensure that the criteria of Stokes' Law are optimised in the final product. The creation of these properties consequently ensures that the normally incompatible mixture of Irish dairy cream and alcohol will remain stable for the appropriate commercial shelf life.

#### 4.4. **BOTTLING:**

Irish Cream is manufactured on the island of Ireland. Bottling may take place outside the island. Any bottling taking place outside of the island will be subject to company controls and official verification, which will ensure the products' safety and integrity.

With regard to bottling outside the island of Ireland, the Irish authorities consider that within the European Union this would be taken into account by other Member States in

the context of their own multi annual control plans. In regard to third countries, inspection will be undertaken by officials from the Department of Agriculture, Food and the Marine as appropriate and with the agreement of the UK authorities where Irish Cream is manufactured in Northern Ireland.

#### 5. DETAILS BEARING OUT THE LINK WITH THE GEOGRAPHICAL ENVIRONMENT OR THE GEOGRAPHICAL ORIGIN:

Production of Irish Cream must take place in the geographical area of the island of Ireland.

Three elements form the basis for the claim for a Geographical Indication for Irish Cream:

- 1. Use of Irish Diary Cream
- 2. Use of Irish Whiskey
- 3. Creation of Cream Liqueur Production Techniques in Ireland

### 5.1. IRISH DAIRY CREAM:

Irish Cream Liqueur must contain fresh Irish dairy cream coming from Irish milk which complies with Council regulation 2597/97 of 18 December 1997 or equivalent. Irish milk is milk produced on the island of Ireland including Northern Ireland.

Since the unique Irish seasonal and cattle herd husbandry practices affect milk and milkfat characteristics, the use of this ingredient imparts distinctive quality and organoleptic properties to the final product.

Irish dairy products have intrinsic characteristics due to Ireland's geographic location and its climatic seasonality, giving such products a number of unique characteristics. As an island washed by the Gulf Stream, Ireland experiences a much more moderate climate than it might otherwise expect at this latitude. In consequence, the resulting climate is uniquely suited for grass production. The seasonality of grass production affects cattle feeding patterns and other major aspects of animal husbandry, such as the particularly extensive reliance on grass as a natural feedstuff. All these circumstances make Ireland uniquely suited to the production of dairy produce with consistent and superior quality.

The cream selected for use in Irish Cream comes from cows that feed outdoors on grass for most of the year. Some 80% of Ireland's agricultural land is devoted to grassland and a mild climate and plentiful rainfall contribute to a grass growth rate exceeding the European average by over a third. Cows graze outdoors for up to 300 days a year and up to 95-97% of their diet is grass.

The grass based diet imparts a characteristic golden yellow colour in the high fat cream used as a raw material for Irish Cream. This colour is the direct result of the high concentration of the antioxidant and vitamin A precursor,  $\beta$ -Carotene pigment which enters the diet of the cow through the grass. This parameter can be demonstrated with significantly higher b\* scores on a Hunter Lab scale indicating samples are more yellow. The antioxidant capacity of this pigment also has an effect on the sensory properties in that it prevents lipid oxidation and ensures that the fresh, creamy, dairy compounds are preserved and dominant.

Other compounds that affect the taste of Irish cream are terpenes, aldehydes, toluene, phenolic and nitrogen heterocycles. These may be transferred to the milk of the cow from their environment through inhalation or digestion or a combination. The relative concentrations of linolenic acid (18:3) and eicosapentaenoic acid (20:5) and the ratio of eicosapentaenoic acid to arachidonic acid (20:4) which is critical for the formation of omega-3 derived eicosanoids are significantly higher in milk from grass fed cows.

In summary the distinct physicochemical and organoleptic properties associated with cream from grass fed cows directly affect the characteristics of Irish Cream.

### 5.2. IRISH WHISKEY:

The unique, intrinsic qualities of the product are enhanced by its Irish Whiskey content, which must be used in the production of Irish Cream. Irish Whiskey is a Geographical Indication and is a distinctive whiskey which has flavours that develop as a result of the use of Irish grain, water and maturation in wooden casks on the island of Ireland for a minimum of three years. The creation of Irish whiskey is a highly skilled process and requires the individual experience and expertise of the Distiller, stillman and blender to ensure the finest, high quality whiskey is produced.

#### 5.3. **PRODUCTION TECHNIQUES:**

The technique of creating cream liqueurs was developed in Ireland. The creative combination of fresh Irish dairy cream, spirits and Irish Whiskeys proved an instant hit among consumers.

This success resulted in other producers around the world replicating the technique to produce similar products. Irish Cream, as the original, continues to be the most popular product within the liqueur category.

The original adoption, subsequent optimisation and commercialisation of the production techniques in Ireland further supports the Geographical Indication claim for Irish Cream.

#### 5.4. <u>Supplementary Information:</u>

### 5.4.1. <u>HISTORY:</u>

Irish Cream is a relatively recent addition to the pantheon of traditional Irish drinks. Indeed when they were first unveiled in Dublin in 1974, Irish Cream created a novel category of spirit drinks. The combination of fresh Irish dairy cream, spirits and Irish whiskey has proven to be extremely popular and Irish Cream Liqueurs have contributed substantially to the global growth of the liqueur sector.

### 5.4.2. ECONOMICS AND EXPORTS:

Irish Cream Liqueurs are very valuable to numerous and varied sectors of the Irish economy but most particularly to the Irish dairy industry. Approximately 350 million litres of fresh Irish milk are required annually to produce Irish Cream Liqueur.

Apart from the direct value of the huge export of Irish Cream, the added-value of the procurement of quality Irish raw materials and premium packaging currently accounts for a major contribution to our national economy. It is estimated that currently Irish Cream Liqueur is the largest contributor to Irish beverage exports with over 270 hundred thousand bottles being produced daily. Over 90% of Irish Cream is exported.

Many employment opportunities were created in Irish Cream plants and also in the factories and processing plant of their suppliers.

# 6. ANY REQUIREMENTS LAID DOWN BY COMMUNITY AND/OR NATIONAL PROVISIONS AND/OR REGIONAL:

### 6.1. **LEGISLATION:**

**Spirit Drinks:** Regulation (EC) No. 110/2008 of the European Parliament and of the Council of 15th January 2008, Commission Implementing Regulation (EU) No 716/2013 of 25 July 2013 laying down rules for the application of Regulation (EC) No 110/2008 of the European Parliament and of the Council on the definition, description, presentation, labelling and the protection of geographical indications of sprit drinks.

National legislation enforcing these including SI No 429/2009 – European Communities (Spirits Drinks) Regulation 2009 amended by SI No 118 of 2013 European Communities (Spirit Drinks) (Amendment) Regulation 2013 and any subsequent amendment or replacements.

**Milk**: REGULATION (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007

**Cream**: Council Regulation (EEC) No. 1898/87 of 2 July 1987 (amended by Commission Regulation (EEC) no 222/88 and Council Decision 95/1/EC)

Whiskey: Irish Whiskey Act 1980

**Colours and Sweeteners**: Regulation (EC) No 1333/2008 of The European Parliament and of the Council of 16 December 2008 on food additives and amendments. And Commission Regulation (EU) No 231/2012 of 9 March 2012 laying down specifications for food additives listed in Annexes II and III to Regulation (EC) No 1333/2008 of the European Parliament and of the Council and amendments.

**Hygiene and Food Safety**: Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004, amending Regulations (EC) 178/2002 of the European Parliament and of the Council of 28 January 2002, Commission Regulation (EC) No 1019/2008 of 17 October 2008. And Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009.

**Labelling Advertising and Presentation of Foodstuffs**: Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006, of the European Parliament and the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission regulation (EC) No 608/2004.

**Flavouring**: Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods and amending Regulation (EC) No 1601/91 of the Council, Regulations (EC) No 2232/96 and (EC) No 110/2008 and Directive 2000/13/EC.

#### 7. NAME AND ADDRESS OF APPLICANT:

Applicant name:Department of Agriculture Food and the MarineAddress:Food Industry Development Division,<br/>Department of Agriculture Food and the Marine,<br/>Agriculture House, Kildare Street, Dublin 2, Ireland.

Telephone:+353 1 607 2371Email:Spiritdinks@agriculture.gov.ie

#### 8. OFFICIAL CONTROLS:

Controls on Irish Cream are based on meeting legislative requirements, implementing quality control systems and ongoing systems supervision of the control of the Geographical Indication "Irish Cream" by the competent authorities.

Verification of compliance with the provision of this technical file in the Member State's Ireland and the United Kingdom will be carried out respectively by the Department of Agriculture, Food and the Marine and Her Majesty's Revenue and Customs.

#### 8.1. Competent Authorities

Irish Cream is an island of Ireland geographical indication. The competent control authorities responsible for geographical indications "Irish Cream" in the two jurisdictions are:

- 1) Department of Agriculture, Food and the Marine, Agriculture House, Kildare Street, Dublin 2, IRELAND
- HMRC Alcohol Policy Team, 3W Ralli Quays, 3 Stanley Street, Salford M60 9LA, UNITED KINGDOM

### 8.2. Control Bodies

Irish Cream is an island of Ireland geographical indication. The control bodies responsible for geographical indications "Irish Cream" in the two jurisdictions are:

- 1) Department of Agriculture, Food and the Marine, Agriculture House, Kildare Street, Dublin 2, IRELAND
- HMRC Alcohol Policy Team, 3W Ralli Quays, 3 Stanley Street, Salford M60 9LA, UNITED KINGDOM

#### 9. LABELLING:

Irish Cream is a geographical indication. The geographical link is supported by the presence of Irish dairy cream, Irish Whiskey and the creation of the category on the island of Ireland. In the context of a reference to the geographical indication, a reference to Irish Whiskey content which includes details of other alcohol content may be made.

Irish Cream must bear the Geographical Indication "Irish Cream". It may also bear the sales denomination "Liqueur".

This must -

• Appear on the front of the bottle and on packaging or materials used for display purposes during the marketing of Irish Cream;

- Be prominent, printed in a conspicuous place in such a way as to be easily visible and legible to the naked eye and indelible so that it is clear that it is the sales description of the liqueur;
- Be printed in a way that gives equal prominence to each word making up the name of the category;
- Be as prominent as any other description of the liqueur on the container or packaging.

This must not be -

- Overlaid or interrupted by other written or pictorial matter
- Used in conjunction with any other words.

Spirit drinks must not be labelled, packaged, sold, advertised or promoted in such a way to suggest they are Irish Cream unless they meet the relevant requirements set out in the technical file.