

American Cheese Society Cheese and Dairy Product Lexicon and Glossary



American Cheese Society
Cheese and Dairy Product Lexicon and Glossary
THE ACS LEXICON & GLOSSARY

TABLE OF CONTENTS

Introduction.....	3-5
ACS Lexicon & Glossary.....	6-36
List of Terms in the ACS Lexicon & Glossary.....	37
Appendix A: Quick Reference Guide.....	38-42
Appendix B: Adjectives Commonly Used in Evaluation.....	43
Bibliography.....	43



American Cheese Society Cheese and Dairy Product Lexicon and Glossary by [The American Cheese Society](#) is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](#).

Version 1 was published February 1, 2018. This document was compiled and edited by Dr. Stephanie Clark, Craig Gile, Vince Razionale, Bill Rufenacht, and Sarah Spira. Terms and definitions were modified from the Technical and Aesthetic score sheets and glossaries created by the ACS Judging & Competition Committee over the course of the history of the competition, as well as references cited in the Bibliography.

INTRODUCTION

The **ACS Cheese and Dairy Product Lexicon and Glossary** aims to facilitate conversations across the supply chain of cheese by creating a credible, modern resource that provides a greater understanding of the myriad ways in which cheese is discussed and described.

A “working group” of ACS staff and experts in dairy food science, cheesemaking, and cheesemongering were involved in compiling what will hereafter be referred to as the ACS Lexicon & Glossary. The objective was to codify the terminology used when talking about sensory characteristics and evaluating and selling cheese and fermented dairy products.

The ACS Lexicon & Glossary is a living document. The working group started with a focused selection of vetted technical terminology and will expand this work in the coming years to include a unique flavor and aroma wheel in addition to the terms included in the ACS Lexicon & Glossary. Terms will be added if/when they meet the following criteria:

- The taste, flavor, aroma, texture, or appearance can be expressed in scientific terms, or a consensus has been reached for the use of the term and its descriptor.
- The cause of the defect or attribute can be scientifically explained.

Assessing, grading, judging, evaluating, marketing, and socializing with cheese, and the varying contexts in which these activities happen, require different types of terminology. It is ACS's hope that, through the development of the ACS Lexicon & Glossary, cheese industry members can communicate more readily and clearly about cheese and dairy products, in order to encourage the production, sale, and consumption of increasingly high-quality artisan and specialty cheeses. It is important to note that words such as “good” or “bad” do not appear in the ACS Lexicon & Glossary, as such terms are subjective. While a cheese may receive a low score in a contest, it may sell very well in the market, because it meets consumer desires or otherwise fits a niche in the marketplace. The reverse can also occur – winning awards does not guarantee market success.

How to Use this Glossary:

Terms in the ACS Lexicon & Glossary are listed in alphabetical order for ease of use. ACS has adopted the following structure to provide additional information about the terms. Please note that the elements within this structure will be applied to the terms as they are relevant.

- **Definition:** Definition of the term.
- **Reference point:** Most frequent/common associations with the term.
- **Styles where it occurs:** Styles of cheese or dairy products where this attribute is most common.
- **Attribute/Defect:** Whether the characteristic is generally considered an attribute or a defect, and why. If a characteristic is only considered a defect, only the word **Defect** will appear.
- **Possible causes:** Identification of possible technical cause(s) for the defect.
- **Synonyms:** Words that can be used interchangeably with the term.
- **Related terms:** Words related to the term; these help to provide a deeper understanding of the term. Synonyms and related terms that are defined in this glossary are formatted in ALL CAPS.

Talking About the Sensory Characteristics of a Cheese or Dairy Product:

During an evaluation of a cheese or dairy product, the following areas are assessed:

- **Rind/Surface:** The exterior layer of a cheese. When a cheese is evaluated, the condition, appearance, flavor, and aroma of the rind are assessed. Evaluators and judges might comment

on the thickness/thinness, roughness/smoothness, evenness of the rind, and aroma/flavor, including how the flavor of the rind works with the flavor of the paste and the rest of the cheese.

- **Body/Paste/Interior of the cheese:** The internal character of the cheese. Some styles may not have an obvious change from surface to interior, while others can be dramatically different from surface to core. Evaluators and judges will either remove a plug (using a metal trier) or cut into the cheese, depending on the cheese format. Evaluators and judges will often break the cheese plug to observe several characteristics, then “work,” or manipulate, a smaller portion of the plug of cheese between the thumb and two forefingers to partially evaluate the product prior to tasting.

Sensory characteristics evaluated in cheese and dairy products are grouped into the following categories:

- Body/Texture
- Flavor/Aroma
- Appearance/Color/Rind Development

In the ACS Lexicon & Glossary, the following definitions are used when talking about the sensory characteristics of a cheese or dairy product:

- **Attribute:** A characteristic of the product’s sensory profile, determined by organoleptic evaluation. An attribute is typically considered a positive term, or an asset, depending on context and intensity.
- **Defect:** A characteristic that detracts from the product’s sensory profile. A characteristic that is an attribute in one product may be a defect in another, if it does not belong in that cheese’s sensory profile at all (e.g., rancidity in colby cheese). Additionally, a characteristic that is typically considered an attribute can be a defect if it:
 - does not belong in that cheese’s sensory profile at that age (e.g., sulfur in mild cheddar);
 - is lower than expected in that cheese’s sensory profile (e.g., low salt in feta); or
 - is excessive in that cheese’s sensory profile (e.g., extreme tyrosine crystals in cheddar).

Baseline Definitions:

Basic Tastes: BITTER, SALTY, SOUR (ACID), SWEET, UMAMI

Basic tastes are experienced on the tongue and palate and, in and of themselves, do not produce aromatic compounds. When assessing and evaluating basic tastes, one observes and identifies how they are experienced, in the context of a given dairy product. The impression can take on either positive or negative connotations, depending on the context and style of cheese. Differences in perception (e.g. variances in sensitivity for bitter and heat perception) and preference (e.g. variances in preferences for sweetness and astringency) play a role in overall acceptability of a product. Even where in the mouth or how a characteristic is perceived may vary greatly. The ACS Lexicon & Glossary aims to use language that has been generally applicable across decades of describing and judging dairy products. The language will continue to evolve, and this document will be modified accordingly.

The ACS Judging & Competition:

Standards of identity exist for a number of dairy products and ingredients. The United States Standards of Identity can be accessed online through the FDA Code of Federal Regulations ([Cheeses](#) and [Milk and Cream Products](#)). The American Cheese Society’s definitions of cheeses can be found on the [ACS website](#), along with information about the ways in which cheeses and dairy products can be categorized. Cheesemakers submit cheese to the ACS Judging & Competition based on the categories defined by the ACS Judging & Competition Committee. The terms, or characteristics, that are listed on ACS Judging & Competition score sheets reflect attributes that are typical or characteristic of that particular [category](#). Definitions for those terms appear in this ACS Lexicon & Glossary.

A product's score sheet in the ACS Judging & Competition is meant to communicate the culmination of each judge's overall experience with the product. Boxes are checked to indicate the presence or absence of attributes in a product, and judge comments are included on score sheets. In the case of technical judges, the score is based upon half- to full-point deductions from "ideal" for the given style. In the case of aesthetic judges, full points are added for quality traits and characteristics that make the product unique.

When evaluating products entered into the ACS Judging & Competition, Aesthetic and Technical judges likely use one of the following scales when considering each characteristic:

- None; much too little; a little too little; just about right; a little too much; much too much; excessive
- Very low; average; very high
- None; slight; definite; pronounced

These words, however, do not explicitly appear on the ACS score sheets, nor do they appear in this glossary. The ACS Lexicon & Glossary includes the preferred terminology and offers suggestions regarding how to measure and communicate the experiential variables: presence, absence, intensity, and experience of the characteristics herein defined.

Origin of Flavor in Cheese

What animals eat and variability in ingredients, temperature, and humidity play a role in dairy product quality. The way one experiences flavor in cheese is related to the development of volatile and non-volatile compounds. Lipolysis, glycolysis, and proteolysis are the main chemical processes that cause the components of cheese to break down into peptides, esters, acids, ketones, fatty acids, etc. This biochemical cascade is different for every style of cheese, but it is what comprises the unique sensory characteristics of the cheese being evaluated. For more information on the chemistry of cheese, and how it relates to flavor, see the [Cheese Science Toolkit](#).

Origin of Cheese Defects:

Defects in cheese and other dairy products can result from many variables that relate to the loss of control (temperature, pH, humidity, bacteria, etc.) between the field and processing plant, within the processing facility, along the distribution chain, at the retail store/restaurant, and with the consumer. Excess lipolytic activity, late gas blowing, microbial contamination, and other chemical reactions lead to appearance, taste, flavor, aroma, body, and texture defects. The aim of the ACS Lexicon & Glossary is not to give exhaustive explanations, but rather to provide context with generally understood possible causes for the defects identified and described. Readers are encouraged to review the books and articles listed in the bibliography to gain a deeper understanding of dairy chemistry and microbiology, which drive many quality characteristics of dairy foods. Links to the books and articles can be found in the [ACS Library](#).

Sales, Marketing, and Monger Talk: Adjectives and Synonyms

Technical terms often do not have the same poetic, romantic, descriptive, and associative weight as some of the synonyms commonly used in the marketing and promotion of cheese and dairy products. Without passing judgement on the use of those terms, ACS recognizes that sometimes industry members all need to speak the same language in order to continue to work with producers to develop, market, and sell great cheese. The language of description, of selling cheese, is an equally important tool to communicate with consumers, in order to expand the audience for artisan and specialty cheese and dairy products. The ACS Lexicon & Glossary will hopefully help to connect the dots through all points of the supply chain and elevate the cheese experience for all involved.

THE ACS LEXICON & GLOSSARY

ACETALDEHYDE

Definition: “Green apple” flavor

Reference Point: Plain yogurt, Granny Smith apple, Apple flavored Jolly Rancher®

Styles where it occurs: Yogurt

Attribute/Defect: Although some acetaldehyde is expected in yogurt, none (flat) would be atypical, and a high level (out of balance) would be considered a defect.

Possible causes: If the starter culture, *L. bulgaricus* (stimulated at higher incubation temperatures (112°F, 44.4°C)), dominated the fermentation, acetaldehyde could become excessive. Using too much green apple flavoring could lead to the defect.

Synonym: Green apple

Related terms: ATYPICAL, Harsh, SHARP

ACID

Definition: A basic taste associated with lactic acid production. Cheeses are evaluated and assessed based on the intensity of the experience of this taste.

Reference Point: Lemon/lime, citric acid

Styles where it occurs: Possible in all fermented dairy products.

Attribute/Defect: Some level of acid is expected in most fermented dairy foods, but it can be considered a defect in certain contexts (e.g., if too low in yogurt; if too high in mild Cheddar).

Possible causes: Use of high acid milk, too much lactic acid production by cultures, high moisture. In fresh unripened cheeses, acid that is too high indicates possible temperature abuse – fermented too high or too long. Improper use of salt or temperature control can also cause improper acid levels in dairy products.

Synonym: SOUR

Related terms: ATYPICAL, Bright, CHEESY, Citrus, LACTIC, SHARP, Tangy, Tart

AFTERTASTE see FINISH

AMMONIA/AMMONIATED

Definition: Aroma associated with cat urine, often associated with soft-ripened cheeses that have been aged too long.

Reference Point: Cat litter box, diluted household ammonia

Styles where it occurs: Brie, Camembert, etc.

Attribute/Defect: While some consumers like a hint of ammonia in soft-ripened cheeses, excessive ammonia is almost always considered a defect.

Possible causes: Breakdown of protein and production of ammonia with extensive proteolysis and extended storage.

Synonym: Catty

Related terms: Over Ripe, RIPE

ANIMAL

Definition: Distinct aroma and/or flavor associated with cow, goat, sheep.

Styles where it occurs: Possible in all fermented dairy products.

Attribute/Defect: In many cases, it is important to be able to recognize that a cheese was made with milk from a given species. However, when the aroma and/or flavor is extreme, it can become objectionable.

Possible causes: Over-agitation of milk (lipolysis), unsanitary conditions

Synonyms: Cowy, Goaty, Sheepy

Related terms: BARNY, UNCLEAN

APPEARANCE

Definition: An attribute that encompasses the variety of terms used to describe the visual appearance of cheese body and rind development characteristics. It is one of the main families of attributes that is evaluated when a cheese is assessed, and is often accompanied by a qualifying adjective. If the cheese is wrapped with a cloth or other wrapper, a variety of descriptions may be used by judges for describing the wrapping of cheese (e.g., wrinkled, torn, dirty, too long or short at one end, loose from cheese).

Reference point: Color of the paste, the condition of the rind, and cloth covering, if present. Appearance can be described in a positive or negative manner.

AROMA

Definition: Aroma is the overall impact of a cheese or dairy products' odor. It is one of the main families that is evaluated during an assessment. The term is usually qualified by a modifying adjective.

Attribute/Defect: Aroma can be either a positive attribute or a defect, and these factors are determined by the style of cheese being evaluated and the intensity of the aromas.

Related terms: FLAVOR, MOUTHFEEL, VOLATILES

ASTRINGENT

Definition: Mouthfeel trait caused by the contraction of mucus membranes in response to taste and/or flavor experience. It is described by a puckering, or a rough, sandpapery feel on the oral mucosa.

Attribute/Defect: Tolerance for astringency is very personal, however if astringency is out of balance in a product, it will be considered a defect.

Reference Point: Tannic foods (red wine, tea), unripe bananas

Synonym: Mouth-drying

ATYPICAL

Definition: Certain characteristics are expected in products, especially those with a defined standard of identity. When a product does not meet expectations, the term atypical may appear in a judge's comments.

Styles where it occurs: Possible in all fermented dairy products.

Attribute/Defect: Atypical may be used to describe appearance/color, aroma, flavor, and/or body/texture of a product. Sometimes something atypical can set a product aesthetically apart, making atypical an asset.

Possible causes: Improper make conditions, aging conditions, and/or ingredient selection.

Related terms: ACETALDEHYDE, ACID (High or Low), COLOR, FLAT, FOREIGN, Lacks FLAVOR, SALT, UNDERSET, Unnatural

BALANCED

Definition: The term is commonly used by judges to indicate that the product meets expectations for levels of attributes expected, with nothing in excess.

Attribute/Defect: Balanced is a desired attribute in all dairy products.

Synonym: UNIFORM

Related terms: EYES, Delicate, Mellow, Smooth, Even

BARNY

Definition: A flavor trait characteristic of the milking barn, stable, or animal yard.

Reference Point: Fecal aroma or aftertaste. Some evaluators are able to pinpoint flavors to specific animal types – Cowy, Goaty, Sheepy

Styles where it occurs: Cheddar, blue cheese, goat cheeses, and sheep cheeses

Attribute/Defect: This can be considered a defect depending on what is expected of a particular style.

Possible causes: Unclean milk, undesirable microbial growth. In goat milk cheese, “goaty” is associated with volatilized short-chain free fatty acids (butyric, caproic, caprylic and capric acids).

Synonyms: Barnyard, Cowshed, Fecal

Related terms: ANIMAL, Cowy, Funky, UNCLEAN

BITTER

Definition: Basic taste sensation; often experienced at the back of the tongue; for many people it is slower to perceive and longer-lasting than other taste sensations.

Reference Point: Caffeine, quinine, radicchio

Styles where it occurs: Possible in all dairy products

Attribute/Defect: Bitterness perception is highly variable in humans. Some bitterness may be acceptable in certain cheeses when it is in balance (e.g. aged Cheddar). Bitterness is considered a defect in all fresh dairy products.

Possible causes: Extended storage of milk, microbial contamination, high level of psychrotrophic microorganisms, overly active starter cultures, low salt levels, excessive rennet, excessive moisture, poor milk quality, excess acidity, excessive use of certain sanitizers, poor quality ingredients.

Related terms: ASTRINGENT, RANCID, UNCLEAN

BLIND

Definition: Absence of eyes in a cheese expected to have eyes. It may be either the entire cheese or large areas lacking eyes.

Reference Point:



Styles where it occurs: Swiss styles, Alpine styles

Defect: Eyes are expected in specific products, so when they are absent, blind will be indicated on the score sheet.

Possible causes: Lack of propionic acid fermentation, cheese too acidic, cheese body too firm

Related terms: CLOSED, EYES, UNDERSET

BLEACHED/BLEACHING

Definition: A defect found in flavored yogurt, visualized by streaking of white yogurt throughout the colored yogurt body.

Reference point:



Styles where it occurs: Yogurt

Defect: Streaking color is unappealing to consumers.

Possible cause: Decolorization may result from localized oxidation/reduction reactions in yogurt.

Related terms: COLOR, COLOR LEACHING, FADED, Streaking

BLOWN

Definition: The integrity of the cheese is destroyed by excessive gas production. Blown cheese often exhibits large void areas and collapsed structure.

Reference point:



Styles where it occurs: Swiss styles, possible in other hard cheeses as well.

Defect: Blown cheeses are typically unsalable except as a low-value ingredient for pasteurized process cheese.

Possible causes: Uncontrolled gas formation, high moisture, soft cheese body, late-blowing by *Clostridia* species

Related terms: CABBAGE, COLLAPSED, GASSY, OVERSET, Lopsided

BROTHY

Definition: Savory taste (umami) and flavor associated with proteins and/or the aromatics and flavor of broth.

Reference point: Boiled meats and broths, mushroom stock

Synonyms: Savory, MEATY, UMAMI

Related term: WHEY

BUTTERY

Definition: Sweet cream and fresh lactic flavors and aromas that are typically associated with butter. Can also refer to texture and mouthfeel of a cheese. The term is associated with the chemical diacetyl, produced by some species of lactic acid bacteria.

Reference point: Butter – both unsalted and salted; butter-flavored popcorn

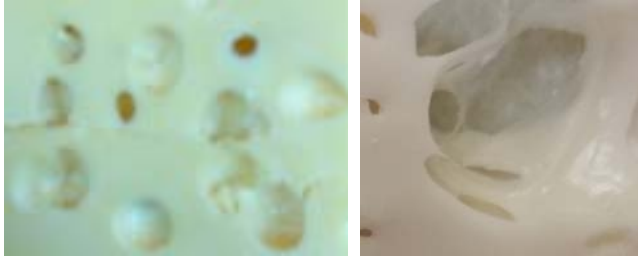
Synonym: Diacetyl

Related terms: CREAMY, LACTIC

CABBAGE

Definition: Eyes are so numerous within the major part of the cheese that they crowd each other, leaving only a paper-thin layer of cheese between the eyes, causing the cheese to have a cabbage appearance and irregular eyes.

Reference point: The left image presented shows a slight extent of cabbage defect, the right image shows a more pronounced example.



Styles where it occurs: Swiss styles

Defect: When Swiss-type cheeses lack the attractive eye appearance that is expected, they may be downgraded.

Possible causes: Late gas blowing because of *Clostridia* contamination; poor pressing of curds, which allows for the formation of large weak areas.

Related terms: BLOWN, COLLAPSED, EYES, OVERSET, STREUBLE

CALCIUM LACTATE

Definition: Calcium lactate crystals (CLC) can appear as pinpoints or as a diffuse white haze on Cheddar-type cheeses. They can also be found on the interior in some cases (less common). Calcium lactate crystals are often confused with TYROSINE crystals. Tyrosine crystals are not the same thing and will not be found in young cheese.

Reference Point:



Styles where it occurs: Cheddars and Cheddar-types

Defect: Consumers sometimes mistake calcium lactate crystals for mold, which results in lost sales.

Possible causes: Calcium level is beyond saturation point, and precipitates out due to rapid, or excess acid production, free whey in package, or elevated storage temps. CLC may be found on young cheeses that have loose packaging and/or have undergone temperature fluctuations.

Related term: CRYSTALS

CARAMEL

Definition: An aroma that is reminiscent of cooked sugar and milk.

Reference point: cooked sugar, brown sugar, toasted butter flavor.

Styles where it occurs: Goudas, Cheddars, Alpine, aged Parmesan styles

Related terms: COOKED, HEATED, SCORCHED, SWEET

CHECKS/CHECKED See **CRACKED, SLITS**

CHEESY

Definition: In butter, the term cheesy is considered a defect because butter should taste like butter, not cheese.

Reference Point: Blend softened butter with any shredded or ground cheese to mimic the cheesy defect.

Styles where it occurs: Butters

Attribute/Defect: Interesting cheesy flavors in butter may not be considered objectionable in cultured cream butter, but are a defect in sweet cream butter.

Possible causes: Contamination with lactic acid bacteria; fermentation of whey not removed during working.

Related terms: ACID, OLD CREAM/OLD MILK, SOUR, UNCLEAR

CHEMICAL See MEDICINAL

CLOSED

Definition: Closed, as opposed to BLIND, is the term used to describe the ideal body of cheeses that are expected to have no gas formation or openings. Cheese is well knit, with no mechanical or gas openings.

Styles where it occurs: Typically used in evaluating hard cheeses.

Related terms: BLIND, EYES, OPEN

COARSE

Definition: This term is used to describe the experience of flavor in butter. Sweet cream butter is expected to be delicate. Coarse means that the flavor is somewhat harsh or out of balance, but generally high quality.

Styles where it occurs: The term is most commonly used for high quality butter that is not perfect.

Attribute/Defect: Coarse is not a serious defect in butter.

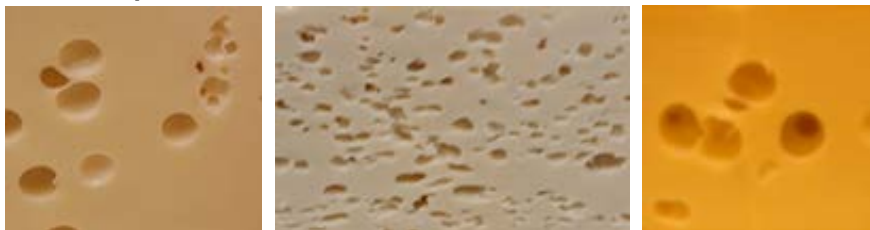
Possible causes: Starting cream had flavor compounds from animal feed; slightly high salt in final product.

Related terms: FLAT, High Salt

COLLAPSED

Definition: This term is used in relation to the appearance of a cheese. It refers to 1) Cheese structure appears to have collapsed or flattened, or 2) Eyes have not formed properly and do not appear round or slightly oval, but rather flattened.

Reference point:



Styles where this occurs: 1) Possible in all cheeses, 2) Swiss styles.

Defect: When Swiss-type cheeses lack the attractive eye appearance that is expected, they may be downgraded.

Possible causes: Abnormal moisture/pH, presence of *Clostridia* bacteria, spontaneous fermentation, uneven moisture

Related terms: BLOWN, CABBAGE, EYES, FROG MOUTH

COLOR

Definition: Color is used by judges to describe a visual aspect of a cheese's exterior/rind and interior appearance. It is desirable to have a cheese that exhibits bright, clear coloration that is uniform, and not mottled, seamy, or uneven.

Styles where it occurs: All fermented dairy products

Attribute/Defect: Many products are judged by their color, and color expectations are associated with specific products. Defective colors can result from spoilage bacteria, exposure of the annatto to oxygen, and/or exposure of the cheese to oxygen and/or light.

Possible causes: Color in cheese comes from the type of dairy animal, their diet, or added ingredients like the colorant annatto.

Related terms: ATYPICAL, BLEACHED, Bright, DULL, FADED, PINKING, MOTTLED, OXIDIZED, SEAMY

COLOR LEACHING

Definition: Pigment trails or leaching of color from fruit into yogurt, herbs or peppers into cheese, etc.

Reference Point:



Styles where it occurs: Flavored dairy products

Defect: Color leaching is relatively common, particularly in light yogurts. It is not as objectionable to consumers as some other defects.

Possible cause: Low pH; poor stabilization or incomplete blending of yogurt base with fruit material.

Related terms: BLEACHED, MOTTLED

COOKED

Definition: A somewhat nutty, custard-like aroma and sweet taste may be notable; Sulfide compounds may arise with excessive heating.

Reference Point: Ultrapasteurized milk; Ultra-high temperature processing (UHT) milk

Styles where it occurs: Cottage cheese

Attribute/Defect: Considered an attribute in some applications and to some cultures; considered a defect if extreme.

Possible cause: Overheating of dressing during pasteurization

Synonym: HEATED

Related terms: CAMEL, NUTTY, SCORCHED, SULFIDE, SWEET

CORKY

Definition: The description of a hard, tough, and overly rubbery cheese texture/body characterized by failure of the cheese to break down when worked between the thumb and fingers. Corky is a more extreme, drier characteristic than curdy.

Reference Point: Wine cork, rubber stopper

Styles where it occurs: Cheddars and other aged cheeses

Defect: If the body is very tough and dry, corky can be quite objectionable.

Possible cause: Dehydration, lack of acid development, salt too high, too much CaCl₂, not enough coagulant, overcooking

Synonyms: Tough, Woody

Related terms: CURDY, Dry, GRAINY, Hard, MEALY, TEXTURE

CRACKED/CRACKS

Definition: This term is used when evaluating the appearance of a cheese. It refers to openings in the exterior wax, or rind and/or interior cheese structure. The terms CHECKED, CHECKS, or picks might be used to indicate smaller-sized cracks. The term splits refers to severe cases, when portions of cheese appear to split apart from the piece.

Reference Point: Externally (left) and internally (right) cracked cheese.



Styles where it occurs: All fermented dairy products

Defect: The appearance of the cheese and internal integrity is compromised to varying degrees, progressing from picks, to checks to cracks to splits.

Possible causes: Poor workmanship, affinage issues, cheese too dry, gas production

Related terms: CHECKED, CHECKS, Disturbed, Open rind, Picks, SLITS, Splits

CREAMY See **BUTTERY, LACTIC, TEXTURE, WEAK**

CROOKED See **UNEVEN**

CRUMBLY

Definition: Describes the texture of a cheese body that breaks during plugging and/or falls apart upon working between thumb and fingers.

Reference point: Queso fresco or feta cheese

The image below exhibits crumbly body that is not expected in an aged cheese.



Styles where it occurs: Many styles of cheese, potentially butter

Attribute/Defect: Considered an attribute in some applications and to some cultures (Queso fresco, feta); considered a defect if extreme and in most cheese applications.

Possible Cause: Body of cheese is not knit together well because of low moisture, excessive salt, low or high acid production, low proteolysis.

Synonym: Friable

Related terms: GRAINY, MEALY, SHORT, TEXTURE

CRYSTALS See **CALCIUM LACTATE, TYROSINE CRYSTALS**

CURDY

Definition: Describes the texture/body of a cheese that is firm and slightly resistant to compression if worked between the fingers. It is rubbery, not waxy, and is somewhat resistant to working into a smooth ball. Small curd particles are evident in worked ball.

Reference point: Very young Cheddar or Monterey Jack

Styles where it occurs: Cheddars, Jacks

Attribute/Defect: While expected to some extent in young Cheddar, it is considered a defect if extreme

Possible causes: Either the cheese is very young, or there have been issues in aging/ripening (lack of proteolysis).

Related terms: CORKY, MEALY, TEXTURE

DULL

Definition: 1) Interior of eyes lack shiny quality, and are dull, not glossy. 2) The color of a cheese is not vibrant.

Styles where it occurs: 1) Swiss 2) All dairy products.

Defect: Dull makes the cheese look lifeless, limiting its aesthetic appeal.

Possible causes: 1) Too much fat in milk and curd, poor whey drainage; 2) issues with pH, low milk quality.

Related terms: COLOR, EYES, FADED, Pale

EARTHY

Definition: A flavor or aroma reminiscent of moist soil or slight mustiness.

Reference point: Potting soil, mushrooms, potatoes

Styles where it occurs: All fermented dairy products

Attribute/Defect: Defect in many styles but can be a positive attribute in cave-aged/mold-ripened styles.

Possible cause: Flavors or aromas could also come from affinage environment and techniques.

Related terms: FEED, MOLDY, MUSHROOM

ELASTIC/ELASTICITY

Definition: Elasticity is a term used to describe the friability of a cheese's texture. This is measured by the way the cheese reacts under pressure. During an evaluation, the manner in which a cheese bends and breaks is assessed, and the texture is described and given descriptive language that places it on the spectrum from short, dry and crumbly, to supple and elastic in texture (desirable) or even weak/pasty (to the other extreme).

Styles where it occurs: Hard cheeses

Attribute/Defect: It is expected that Swiss styles, Alpine styles, Cheddars, and hard cheeses have some level of elasticity.

Synonyms: Flexible, Supple

Related terms: PASTY, SHORT, TEXTURE, WEAK

EYES

Definition: Round open areas, of varying size, within the paste of a cheese, related to gas formation. This is different from OPEN, which refers to mechanical openings in a cheese. Swiss cheese has a well-defined lexicon, with many descriptions of the various types of eyes that present as attributes of the style or as defects.

Reference Point:

Almost everyone is familiar with the iconic image of Swiss cheese, with perfectly round, regularly spaced eyes ranging from $\frac{1}{8}$ to $\frac{3}{4}$ inch in size. In reality, there is much variability, as shown in the image below.



Irregularity of eye shape and size, along with some collapsed eyes, are exhibited in the image below.



Large eyes are shown in the image below, along with some collapsed, irregular, and misshapen eyes and slits.



Styles where it occurs: Swiss styles, hard Alpine styles, other hard cheeses

Attribute/Defect: Depending on the style of cheese, eyes can be considered a defect. In cheeses where eyes are expected, the size, shape, and concentration are evaluated based on what is typical of the style. The ideal Swiss eye size is $\frac{1}{4}$ inch (0.6 cm) to $\frac{1}{2}$ inch (1.27 cm) in diameter. Large is used to refer to cheeses where most eyes are more than $\frac{13}{16}$ (2 cm) but less than 1 inch (2.5 cm) in diameter. Small is used when a majority of the eyes are less than $\frac{3}{8}$ -inch (1 cm) but more than $\frac{1}{8}$ (0.38 cm) inch in diameter.

Possible causes: Ideal eye formation results from carbon dioxide gas production in cheese. In Swiss style cheeses, eye formation is a desirable result of CO₂ production that comes from the fermentation of propionic acid. Eyes can also be formed by spoilage bacteria. These eyes tend to be misshapen, and the cheeses tend to have unclean or atypical flavor profiles.

Related terms: BALANCED, BLIND, CABBAGE, CLOSED, COLLAPSED, DULL, FROG MOUTH, GASSY, IRREGULAR EYES, NESTY, ONE SIDED, OVERSET, STREUBLE, SWEET HOLES, UNDERSET, UNIFORM

FADED

Definition: Describes the color of the surface or interior of a cheese that has a bleached appearance or lacks a vibrant quality and luster.

Reference point:



Styles where it occurs: All fermented dairy products

Defect: Fading makes the cheese look lifeless, limiting its aesthetic appeal, particularly when next to cheeses of the same type that look normal.

Possible causes: Excess fat in milk or curd, exposure to light or oxygen.

Related terms: BLEACHED, COLOR, DULL, PINKING, OXIDIZED

FEED

Definition: Presence of one or more feed flavors carried through the milk into the aromatics of the finished product. In extreme cases, garlic and/or onion flavors may be noted.

Reference point: Hay, dried grass, silage, spent grains, alfalfa, green grass, parsley, green pepper

Styles where it occurs: All fermented dairy products

Attribute/Defect: It can be desirable or undesirable depending on the intensity and style of dairy product.

Possible causes: Results from feeding a particularly pungent feed or silage, or not withdrawing the feed within a suitable time frame prior to milking.

Related terms: Alfalfa, EARTHY, Garlic, Grassy, Green, Onion

FERMENTED

Definition: An aroma and flavor that is reminiscent of vinegar (acetic acid), fermented whey, or fermented fruit.

Reference Point: Acetic acid, pineapple juice with vinegar, wines

Styles where it occurs: Cheddar styles, other fermented dairy products

Attribute/Defect: Generally considered a defect in Cheddar styles, though some might find a fermented flavor interesting.

Possible causes: Low milk quality, non-starter lactic acid bacteria, excess moisture (free whey)

Related terms: FRUITY, GASSY, SOUR, WHEY/WHEY TAIN, YEASTY

FINISH

Definition: Flavor that remains after chewing and swallowing cheese samples. In judging, it is typically used in conjunction with a description of the intensity/length of the aftertaste and may be associated with adjectives like “short” or “long.”

Styles where it occurs: All fermented dairy products

Related terms: AFTERTASTE, FLAVOR

FIRM/TOO FIRM

Definition: *In cottage cheese:* Effort is needed to compress and break down the cottage cheese curds when pressed to the roof of the mouth; curds may resist compression (rubbery) or shatter. *In yogurt:* It takes effort to penetrate the yogurt with the spoon, and the product gives a pudding or custard-like sensation in the mouth.

Reference Point: Greek yogurt or flan (in comparison to standard yogurt).

Styles where it occurs: Cottage cheese, Yogurt

Attribute/Defect: Some level of firmness is expected in hard cheeses. *In cottage cheese:* curds should yield smoothly when pressed to the roof of the mouth. *In yogurt:* Although Greek yogurt is expected to be more firm than standard yogurt, if such body is experienced in a standard yogurt, it is considered a defect.

Possible cause: Cottage cheese: Overcooked, dehydrated; Yogurt: Overstabilized

Synonym: Rubbery (in cottage cheese)

Related terms: GRAINY, LUMPY, MEALY, OVERSTABILIZED, TEXTURE, Tough, Woody

FLAT/LACKS FLAVOR

Definition: Dairy products that contain no undesirable flavor, but very little, if any, characteristic flavor are typically described as FLAT.

Reference Point: Unsalted butter, mild Cheddar cheese

Styles where it occurs: All fermented dairy products

Defect: Although not a serious defect, a dairy product faulted as flat does not meet expectations.

Possible causes: Low salt, early stages of ripening, improper culture selection

Related terms: ATYPICAL, COURSE

FLAVOR:

Definition: Flavor is experienced as a combination of the basic tastes (sweet, sour (acid), salty, bitter, umami), volatile aromatics, mouthfeel, and aftertastes. Flavor can come from the natural cheesemaking and aging process as well as added flavorings like non-milk ingredients such as herbs, spices, condiments, rubs, or washes and wash solutions. The experience of flavor can be measured by intensity and qualified with adjectives such as low or atypical.

Styles where it occurs: All fermented dairy products

Attribute/Defect: This can be a defect depending on what is expected for that style and age. Flavor defects are often described with the following terms: Low, high, lacking (flat), or atypical (not associated with that style)

Possible causes: Flavor comes from the milk, cultures, production, and ripening (lipolysis, proteolysis as gateways to volatile aromas).

Related terms: AROMA, ATYPICAL, Excess, FINISH, Unbalanced, VOLATILES

FOREIGN

Definition: The term foreign may refer to a flavor that is not expected in a dairy product, or foreign matter (an unexpected ingredient or object).

Reference Point: Hair, insect, herbs, metal fragment, etc.

Styles where it occurs: All fermented dairy products

Attribute/Defect: Foreign flavors may not always be considered objectionable, if interesting. However, foreign matter is considered an adulterant (undeclared ingredients), so it is always a defect.

Possible causes: Foreign flavors can result from non-starter bacteria. Foreign matter results from contamination and lack of quality control.

Related terms: ATYPICAL, Chemical, MEDICINAL, METALLIC

FREE CREAM

Definition: The cream dressing does not cling to curds of cottage cheese when spooned onto a plate. It pulls away and separates from the curd.

Reference Point:



Styles where it occurs: Cottage cheese

Defect: Free cream is typically not noticeable immediately, so it is often overlooked by consumers. Technical judges will consider the product improperly stabilized and will consider it a defect.

Possible causes: Improper use of stabilizers or lack of stabilization

Related term: FREE WHEY

FREE MOISTURE/FREE WHEY

Definition: *In yogurt:* Whey release from yogurt curd. The defect is visualized when a container of yogurt is first opened. Whey may appear as a layer above the surface of the yogurt body. *In cottage cheese:* Clear/yellow whey pulls from curds of cottage cheese when spooned onto a plate. *In cheese:* Beads of moisture on the surface of cheese or released from the body when the cheese is tempered and/or cut. Free moisture within the eyes of a cheese can be accompanied by flavor defects, such as whey taint or unclean.

Reference point:



Styles where it occurs: Yogurt, aged cheese varieties

Attribute/Defect: Free whey or moisture is typically considered objectionable because it detracts from the appearance and texture of a product. However, in the case of yogurt it is not always objectionable, unless, which is often the case, it is associated with shrunken.

Possible causes: *In yogurt:* low milk solids, excess acid development, agitation during incubation, insufficient milk pasteurization temperature or holding time, poor product formulation, inadequate stabilizer(s), temperature fluctuations. *In cheese:* Curds are not washed adequately prior to creaming; pH continues to drop after creaming. *In cheese:* Can be a sign of temperature abuse or improper aging.

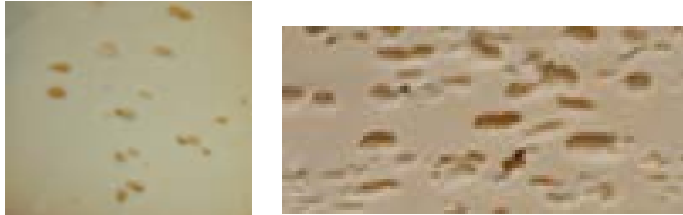
Synonym: Syneresis

Related terms: FREE CREAM, SHRUNKEN, Weeping, Weepy

FROG MOUTH

Definition: There are two definitions for Frog Mouth. 1) When interior of a wheel of cheese is split and looks like a frog's open mouth, 2) When the eyes have developed into lenticular or spindle-shaped openings in cheese.

Reference point:



Styles where it occurs: 1) Whole wheels of cheese like Gouda or Jack. 2) Interior of Swiss

Defect: Frog mouth is almost always considered a defect; when Swiss-type cheeses lack the attractive eye appearance that is expected, they may be downgraded.

Possible causes: Poorly developed/weak rind, mishandling of cheese, improper cooling, or cheese becomes too cold

Related terms: COLLAPSED, EYES, IRREGULAR EYES, OPEN

FRUITY

Definition: Flavor or volatile aroma reminiscent of fruit.

Reference points: Fresh apples, grapes, pears, pineapple, and other tropical fruits.

Styles where it occurs: Cheddar, Swiss, aged Italian styles, goudas, Alpine styles

Attribute/Defect: Certain cheeses have a sweet fruit-like flavor that generally grows more intense with age. While some consider it undesirable, others consider it an interesting complexity in aged cheeses.

Possible causes: Certain starters and non-starter bacteria, enzymatic activity, microbial activity. Low acid, high moisture, low salt, poor milk quality.

Related terms: FERMENTED, Green, VOLATILES, WHEY/WHEY TAIN, YEASTY

GASSY

Definition: Cheese contains gas holes of various sizes, which may be scattered or unevenly distributed throughout the cheese. Gas may appear as round holes or slits, depending on the source of gas, and/or body of the cheese. The term gassy is typically used when eyes are not expected, so it is considered a defect. OPEN is often confused for gassy, but their causes differ.

Reference point:



Styles where it occurs: May be a defect in any semi-solid or solid dairy product.

Defect: Gassy is considered a defect in any dairy product where it is not expected.

Possible causes: Indicative of uncontrolled gas formation, poor sanitation, late gas blowing. Can result from numerous species of gas-producing bacteria and yeast.

Synonym: OVERSET, Pin holes, SLITS, SWEET HOLES

Related terms: BLOWN, Bloated, EYES, FERMENTED, Huffed, YEASTY

GRAINY See MEALY

GREASY

Definition: This term is used in the evaluation of texture or body of butter or cheese. *In butter:* This is extreme smoothness and immediate melting and a slippery, oil-like texture and mouthfeel. *In cheese:* This is evident from an oily sheen to the appearance on the surface of the cheese, as well as a having a slick, fatty, and coating mouthfeel. Cheeses with this defect are often also seamy.

Reference Point: Indicated by free butterfat between particles of curd.

Styles where it occurs: Butters, Cheddars, Swiss styles

Defect: Greasy is almost always considered a defect.

Possible cause: Curd not fused properly. In butter, this indicates that the granules were over-worked, and is more prevalent in butter produced during the summer.

Related terms: SEAMY

HEAT

Definition: Term may be used to describe a burning sensation in the back of the throat

Reference point: Hot peppers, horseradish or wasabi, capsaicin

Styles where it occurs: Blues, Cheddars, Swiss styles

Synonyms: Burn, Itchy, Prickly, Spicy, Tingly

HEATED

Definition: Cheese may have a flavor and volatile aromatics reminiscent of pasteurized process cheese.

Reference point: Melted plastic, old milk, heated whey, pasteurized process cheese

Styles where it occurs: Cheddar, cheese spreads, pasteurized process cheese

Possible cause(s): Processing temperatures exceeded those of standard pasteurization

Synonyms: COOKED

Related terms: CAMEL, SCORCHED, VOLATILES

IMMATURE MOLD

Definition: Terminology used to describe underdeveloped mold on the surface or within a cheese.

Reference Point:



Styles where it occurs: Surface-ripened and mold-ripened cheeses

Defect: Immature mold is typically considered a defect.

Possible cause(s): Improper relative humidity or insufficient time

Related terms: Unripe

IRREGULAR EYES

Irregular is used when eyes have not formed properly and do not appear round or slightly oval, and the eyes are not accurately described by other terms.

Reference Point:



Styles where it occurs: Swiss-style cheeses

Attribute/Defect: Although a variety of eye sizes is not objectionable, misshapen eyes will typically be considered a defect in Swiss-style cheeses.

Possible cause: Lack of control in fermentation; body of cheese and numerous nucleation sites allows many small eyes to form, without fusing

Related terms: EYES, FROG MOUTH, Misshapen eyes, NESTY, SWEET HOLES

ITCHY

Definition: A mouthfeel and sensation of itchiness and tingling that occurs during or after consuming certain styles of cheese. This phenomenon is not well understood.

Styles where it occurs: Aged raw milk cheeses, cheeses with high levels of Lipase

Defect: Itchiness resulting from the consumption of food is unsettling for consumers, and, therefore, an undesirable characteristic.

Possible cause: Lipolysis (formation of free fatty acids), possible histamine reaction

Related terms: Burn, Prickly, HEAT

LACTIC

Definition: A family of aromatics that include milk, cultured cream, and buttermilk. Products exhibit bright, clean aromas and flavor associated with fresh milk.

Reference point: Fresh, uncultured milk, heavy cream, δ -Dodecalactone

Styles where it occurs: All fermented dairy products, especially fresh cheese

Related terms: ACID, Buttermilk, BUTTERY, CREAMY, Milk Fat, Milky, SOUR

LIPASE See RANCID

LUMPY

Definition: Yogurt does not appear smooth, even after blending with a spoon.

Reference Point:



Styles where it occurs: Yogurt

Attribute/Defect: Lumpy is not always objectionable, unless very firm (gel-like).

Possible cause: Overstabilization, high pasteurization temperature

Synonyms: MATTED, TOO FIRM

Related terms: Gel-like TEXTURE

MALTY

Definition: Presence of a distinctive flavor suggestive of malt; derived from a germinating cereal grain in water, typically barley, and then cutting the process short by drying the grain with hot air.

Reference point: Malted milk shakes, or the flavor of milk left in the bowl after eating Grape-Nuts® or Cheerios®.

Styles where it occurs: Cottage cheese, other hard cheeses

Defect: Because bacterial contamination is the cause, malty is considered a defect.

Possible cause: Volatile aromatics produced by spoilage microorganisms (specifically *Lactococcus lactis* ssp. *maltingenes*); poor sanitation; thermal abuse

Related terms: SWEET

MATTED

Definition: Curds appear to be clumped or stuck together.

Reference Point:



Styles where it occurs: Cottage cheese

Defect: Matted is almost always considered a defect.

Possible cause: Fast acid production, improper stirring of curd at any point in the make procedure

Synonyms: Clumped, LUMPY

MEALY

Definition: A textural defect whereby the texture/body of a cheese is crumbly and granular and does not mold well between fingers. In cottage cheese or yogurt, the product lacks smoothness and uniformity and may feel sandy on the roof of the mouth. The term is used when cottage cheese does not clean up after chewing and catches in teeth. On a continuum, mealy would be the largest grains, followed by grainy, followed by sandy.

Reference point: Cornmeal or a cheese like juustoleipä or queso fresco, after crumbling

Styles where it occurs: Cheddar, Alpine styles, Hard/Firm Cheeses

Attribute/Defect: Mealy is somewhat expected in queso fresco. However, it is almost always considered a defect in other cheeses, depending upon degree.

Possible cause(s): *Cheese:* Lack of proper curd knitting and improper acid development or proteolysis.

Yogurt and cottage cheese: Undissolved solids, resulting from 1) unstable casein, 2) too-high homogenization temperature, 3) too-rapid acid development, 4) too-high incubation temperature, 5) excessive amount of culture, 6) incorrect stabilization system.

Synonym: GRAINY

Related terms: CORKY, CRUMBLY, CURDY, FIRM, Gritty, Sandy

MEATY

Definition: Associated with the aromatics and flavor of broth and/or umami.

Reference point: Beef/Chicken broth

Styles where it occurs: Cheddar, Alpine styles, Hard/Firm Cheeses

Synonyms: BROTHY, Savory, UMAMI

MEDICINAL

Definition: Aroma and/or flavor is of chemicals not expected in cheese.

Reference Point: Chlorine, iodine, ammonia

Styles where it occurs: More typical in aged cheeses but could occur in any product if contaminated with chemicals.

Attribute/Defect: While slight ammonia aromas may be acceptable, most medicinal aromas are considered objectionable.

Possible cause(s): Chemical contamination; some strong herbs or feeds may induce chemical aromas in products; protein breakdown.

Related terms: CHEMICAL, FOREIGN, METALLIC

METALLIC

Definition: Flavor trait suggestive of metal that imparts to the mouth a puckery sensation.

Reference point: Copper (penny), iron, blood (if you cut inside your mouth), 0.01% copper sulfate solution, canned pineapple juice

Styles where it occurs: Cheddar, Hard/Firm Cheeses

Defect: Metallic is almost always considered a defect.

Possible cause: Can be related to salt issues. Sea salt (contains minerals) and salt replacers (e.g. potassium chloride) often impart a metallic taste to products.

Synonym: Copper, FOREIGN, Iron, MEDICINAL, "Tin Can" Flavor

MITES

Definition: Members of the arachnid family which are attracted to natural rinds of hard cheeses.

Typically, but not always, from *Tyrophagus casei*.

Reference point: Often presents as a powdery surface on natural-rinded cheeses (left image), or trails or tunnels into cheese surface (right image).



Styles where it occurs: Hard/Firm cheeses with natural rind

Defect: Mites compromise the integrity of the cheese and are therefore always considered a defect.

Possible causes: Infrequent or improper care during aging, improper cloth application (for bandaged cheeses), OPEN texture

Synonyms: Mite-damaged, Mitey

MOLD, IMMATURE see IMMATURE MOLD

MOLDY

Definition: Dark color and off flavor in cheese plug or cut surface, musty aroma or flavor.

Reference point:



Styles where it occurs: Can occur in almost any style of cheese, and the particular style will determine whether it should be considered a defect or an attribute. When discovered in a cheese where it is not expected (below), it is a serious defect.

Attribute/Defect: In styles where mold is typical (i.e. mold-ripened soft cheese, natural rinds, among others), mold is considered an attribute and would not be commented on unless the mold flavor/aroma is lacking or excessive. In styles where mold is not typical (i.e. fresh cheese, sealed or bandaged block cheddar, among others), the appearance/aroma/flavor of mold is undesirable and considered a clear defect.

Possible causes: If not intentional, likely causes include poor seal, cracked rind, or other contact with air.

Related terms: EARTHY, MUSTY

MOTTLED

Definition: Uneven, marbled pattern of coloring in the cheese, most noticeable in colored cheese. Irregular spots or blotches that are lighter or darker.

Reference point: Colby-Jack cheese

Styles where it occurs: Colored cheeses such as cheddar with annatto

Attribute/Defect: It depends on the cheese, but mottled is more often considered a defect than an attribute.

Possible cause: Non-uniform acidity development in curd, combining curd from two different lots, unusual microbial growth (off flavors, body defects may be present)

Synonym: Splotchy

Related terms: COLOR, COLOR LEACHING, GREASY, Uneven coloring, Wavy

MOUTHFEEL

Definition: The way the cheese breaks down while chewing it, and the way we experience the chemical effects in the mouth and throat.

Reference point: Skim milk versus whole milk, black tea, wasabi

Styles where it occurs: All fermented dairy products

Related terms: AROMA, Astringency, GRAINY, MEALY, PASTY, Puckering, OVERSTABILIZED, Smooth, TEXTURE, Volatiles

MUSTY See MOLDY

MUSHROOM(Y)

Definition: Flavor or aroma reminiscent of mushrooms.

Reference point: Freshly cut mushrooms

Styles where it occurs: Soft-ripened styles, natural rinds

Attribute/Defect: Mushroom is considered an attribute in many soft-ripened cheeses. However, it can be a defect, depending on what is expected for that style and age. Low, high, lacking (flavor isn't undesirable, but isn't there), atypical (not associated with that style).

Related terms: EARTHY

NESTY

Definition: Overabundance of small eyes in a localized area, often just under the rind.

Reference point: A small nesty area can be seen along the bottom right of this image.



Styles where it occurs: Swiss styles

Defect: Nesty is almost always considered a defect, but it is not as serious as some other eye defects.

Possible cause: Abnormal gas fermentation, poor knitting of curd, reincorporation of chilled curd to initial pressing

Related terms: EYES, IRREGULAR EYES, ONE SIDED, STREUBLE

NUTTY

Definition: An aroma or flavor characterized by ground or roasted nuts, or nut butter.

Reference point: Peanut oil, peanut or almond butter, toasted hazelnuts or walnuts

Styles where it occurs: Cheddar, Swiss, Alpine styles, other

Attribute/Defect: Nutty aroma/flavor is expected in Cheddar, Swiss, and Alpine styles, and, if lacking, may be considered a defect (flat or atypical flavor).

Related terms: COOKED, SWEET

OLD CREAM/OLD MILK

Definition: Butter initially smells sour but does not clean up quickly; leaves an unpleasant aftertaste. Can be soapy, stale, fishy, or oily.

Reference Point: Smells like stale buttermilk powder or an improperly sanitized creamery.

Styles where it occurs: Butter

Defect: Old cream is always considered a defect

Possible causes: Poor sanitation, storage of milk or cream, elevated temperature during storage

Related terms: CHEESY, OLD INGREDIENT, Stale, STORAGE, UNCLEAR

OLD INGREDIENT

Definition: A term used to describe yogurt that contains an old ingredient (Nonfat dry milk (NFDM), fruits, etc.); a "stale" or bitter aftertaste persists after swallowing. Old ingredient specifically refers to an ingredient, rather than to storage of the product itself.

Reference Point: May smell or taste like stale nonfat dry milk (NFDM) powder, may be a spoiled piece of fruit.

Styles where it occurs: Yogurt, cottage cheese

Defect: Old ingredient is always considered a defect.

Possible cause: Stale ingredients

Related terms: OLD CREAM/OLD MILK, Stale, STORAGE, UNCLEAR

ONE SIDED

Definition: Cheese that is reasonably developed with eyes on one side and under-developed on the other side.

Reference point:



Styles where it occurs: Swiss styles

Defect: When a product appears visually imbalanced or one-sided, it is considered a defect. However, it is not as serious as some other eye defects

Possible cause: High acid curd, improper knitting, poor pressing

Synonym: UNEVEN

Related terms: EYES, NESTY, STREUBLE, UNDERSET, UNIFORM

OPEN

Definition: Describes the visual appearance of a cheese, and has two meanings. 1) Open structure in wax or rind, 2) Contains irregularly shaped mechanical openings.

Reference point:



Styles where it occurs: Uniform mechanical openings are expected in the body of feta but not in well-aged Cheddar.

Attribute/Defect: Openings can be visually appealing or may detract from the intended style of cheese.

Possible causes: Possibly due to poor workmanship, from making and/or pressing process. This defect is not related to issues with gas.

Related terms: CHECKED, CLOSED, CRACKED, FROG MOUTH, Loose knit

OVERSET

Definition: Excessive number of eyes present in the body of the cheese that leads to an overcrowding of eyes.

Reference point:



Styles where it occurs: Swiss styles

Defect: Overset is almost always considered a defect; when Swiss-type cheeses lack the attractive eye appearance that is expected, they may be downgraded.

Possible cause: Late gas blowing, poor pressing of curd

Synonym: GASSY

Related terms: BLOWN, EYES, CABBAGE, UNDERSET

OVERSTABILIZED

Definition: Cottage cheese: the curds feel slick or slimy when pressed with the tongue on the roof of the mouth. Yogurt: tends to be too FIRM.

Reference point: Petroleum jelly on lips

Styles where it occurs: Cottage cheese, yogurt

Defect: Overstabilized is almost always considered a defect.

Possible cause: Overuse of, or poor selection of, stabilizer.

Related terms: FIRM, MOUTHFEEL, Slick, Slimy

OXIDIZED

Definition: Visual and/or flavor defects related to the exposure of cut surface to oxygen and light. The oxidized defect also manifests in cottage cheese (cardboard flavor) and butter (cardboard, freezer burn).

Reference point: Cheese may have a pink hue (instead of orange) on the surface and taste a bit like cardboard or brown paper towel.

Styles where it occurs: All fermented dairy products

Defect: Although intended in traditional Swiss, oxidized is almost always considered a defect in other dairy products.

Possible cause: Exposure to oxygen or light for extended period of time causes off flavors to develop.

Synonym: PINKING

Related terms: COLOR, FADED

PASTY

Definition: The texture of a cheese body breaks down readily, seems wet, and sticks to thumb and fingers while working.

Reference point: Wet dough, cream cheese, chevre

Styles where it occurs: Can occur in nearly all styles, though commonly used in grading Cheddar/hard cheeses, or in softer unripened styles like cottage cheese.

Attribute/Defect: Some level of pasty body is to be expected in chevre and cream cheese. But generally, pasty is considered a defect.

Possible cause: High moisture in curd, high moisture in cheese, high acid, low salt

Synonym: Sticky

Related term: ELASTIC/ELASTICITY, MOUTHFEEL, Soft, TEXTURE, WEAK, Wet

PINKING

Definition: Discoloration of cheese that presents itself by turning from orange to pink. Pinking can also happen to Swiss cheeses and presents as a pinkish layer near the rind.

Reference point:



Styles where it occurs: Cheddar, other cheeses that are colored with Annatto, Swiss styles

Defect: Pinking is unappealing to consumers and is considered a serious defect.

Possible cause: Evidence of bleaching of annatto by exposure to light – most often a defect that occurs in pre-packed cheeses for retail. In Swiss-style cheeses, this is a result of spoilage microorganisms.

Synonym: OXIDIZED

Related terms: COLOR, FADED

PRESENTATION See **APPEARANCE**

RANCID

Definition: Enzymatic hydrolysis of fat yields aromatic free fatty acids like butyric, caproic, caprylic and capric acids.

Reference point: Rancidity lends characteristic flavor to the following cheese styles: Asiago, Cotija, feta, Romano, Provolone cheeses

Styles where it occurs: All fermented dairy products

Attribute/Defect: Although expected to a certain degree in some cheeses (listed above), it can be objectionable if out of balance/harsh; rancid is not appropriate in most cheeses (Cheddar, Jack, mozzarella, etc.). Although the word rancid is often used to describe oxidized nuts, when referring to dairy products, we use the term rancid to only apply to hydrolytic rancidity (lipase-induced rancidity).

Possible causes: Hydrolysis of fatty acids by lipase (lipolysis); over-agitation or homogenization of raw milk will cause rancidity; contamination of pasteurized milk with raw milk

Related terms: baby vomit, BITTER, goaty, LIPASE, piquant, soapy, UNCLEAN

RIPE

Definition: Refers to a cheese that is at its peak in terms of flavor, aroma, and gustatory experience. It is ideal to consume a cheese when it is ripe.

Styles where it occurs: All fermented dairy products

Related terms: À point, AMMONIA/AMMONIATED, Over ripe, Under ripe

ROPY

Definition: When stirred, and a spoon is lifted up out of yogurt, a viscous string of yogurt follows the spoon. The yogurt feels viscous in the mouth.

Reference Point:



Styles where it occurs: Yogurt

Attribute/Defect: Ropy is not necessarily a defect unless overly slick and slimy. Ropy cultures (certain strains of *Lactococcus lactis*, etc.) are often used in natural yogurt, instead of stabilizers, to provide body to the product.

Possible causes: Ropy cultures or overstabilization

Related terms: Stringy, slick, slimy

RUBBERY see FIRM

SALT(Y)

Definition: Salt is a basic taste, and it is an essential ingredient in the cheesemaking process.

Reference point: NaCl

Styles where it occurs: All fermented dairy products

Attribute/Defect: Too much or too little salt can cause technical errors in the cheesemaking process, and if it is too low or too high, it is considered a defect. High levels of salt can limit flavor development but also mask off-flavors, while low levels of salt can lead to more nuanced flavor development but also allow off-flavors to present themselves more readily.

SCORCHED

Definition: Butter has a caramel or butterscotch flavor

Reference point: Caramelized butter

Styles where it occurs: Butter

Attribute/Defect: Although relatively appealing and may earn points from an ACS Aesthetic Judge during an evaluation, scorched is considered a technical defect.

Possible cause: Overheating of cream used for buttermaking

Synonym: Heated

Related terms: CAMEL, Caramelized, COOKED, SWEET

SEAMY

Definition: The presence of white thread-like lines that form between curds in a milled-curd cheese.

Styles where it occurs: Cheddar, other milled-curd cheeses

Defect: Seamy is typically considered a technical defect.

Possible cause: pH during salting is either too high or too low, higher temperatures during pressing, not enough time given after salting but before hooping

Related terms: COLOR, GREASY, MOTTLED

SHARP

Definition: Although there is no agreed-upon definition of the term, sharp is commonly used to refer to cheese that has some level of intensity, usually associated with acidity, though other flavors can also qualify as sharp to some – such as bitter or complex. It can also be used as a way to refer to aged Cheddar – as opposed to “mild” for young Cheddar, though there is no agreed-upon age difference across regions and producers.

Styles where it occurs: Used most often in Cheddar

Related terms: ACETALDEHYDE, ACID, Piquant, SOUR, SULFIDE

SHATTERED CURD

Definition: Curds in creamed cottage cheese appear to be broken, non-uniform in shape and size.

Reference Point:



Styles where it occurs: Cottage cheese

Attribute/Defect: Shattered curd has become so commonplace that it is not considered a serious defect unless extensive.

Possible cause: Curd breakage can occur any time after the initial cut. Shattering is almost inevitable unless extreme care is taken at every stage between cutting and cupping.

Related terms: Non-uniform

SHORT

Definition: The texture and body of a cheese lacks typical elasticity. Cheese sample takes a "short" time to break and may be tough to remove from cheese body without breaking.

Reference point: Dry, aged Cheddar

Styles where it occurs: Typically used to describe texture in aged cheese.

Attribute/Defect: Short is not generally objectionable, and may only be noted if pronounced, or if uncharacteristic for the given product.

Possible cause: Excess acid production; dehydration

Related terms: CRUMBLY, Dry, ELASTIC/ELASTICITY, TEXTURE, WEAK

SHRUNKEN

Definition: The defect is visualized when a container of yogurt is first opened. The yogurt pulls in from the edges of the container due to tightening of curd structure; free whey often fills the void.

Reference Point:



Styles where it occurs: Yogurt

Defect: Shrunk is unappealing to consumers and is typically considered a technical defect.

Possible cause: Low milk solids, excess acid development, agitation during incubation, insufficient milk pasteurization temperature or holding time, poor product formulation, inadequate stabilizer(s), temperature fluctuations.

Related terms: FREE WHEY

SLIP COAT

Definition: Excessive proteolysis under the rind leads to a liquid layer on top of an acidic, firm center. Often presents as a thick rind, sometimes curling back or pulling away from the paste, with a gap left by the pooling of overly liquid paste, or spilling out of liquid paste when the cheese is cut into.

Reference point:



Styles where it occurs: Mold-ripened soft cheeses

Attribute/Defect: Though this type of soft, soupy and gooey cheese can be a selling point and appealing to some, it is generally considered a technical defect.

Possible cause: Too wet going into aging room, high humidity in aging room, excessive aging.

Related terms: Peau de Grenouille, Slip skin, Slip rind

SLITS

Definition: Short linear gas formations. Sizeable cracks, usually in parallel layers and usually clean cut, found within the body of the cheese are called splits.

Reference point:



Styles where it occurs: Firm/semi-firm cheeses

Defect: When Swiss-type cheeses lack the attractive eye appearance that is expected, they may be downgraded. Cheddar cheese exhibiting slits are downgraded as being gassy.

Possible cause: Slits are signs of uncontrolled gas formation (cheese matrix splits instead of forming round eyes), likely because of contamination with Clostridia.

Synonym: GASSY

Related terms: CHECKS/CHECKED, CRACKS, Fish Eyes, Picks, Splits

SMOKEY/SMOKY

Definition: The presence of smoke-like aromas and flavors in cheese.

Reference point: Campfire, Barbecue, Bacon, Bologna

Styles where it occurs: Smoked cheese, but also in Alpine styles

SOFT See **WEAK**

SOUR

Definition: Non-volatile taste sensation. Pungent acidic aroma/flavor resembling sour cream.

Reference point: Citric Acid, citrus, sour cream

Styles where it occurs: All fermented dairy products

Attribute/Defect: In most cheeses, it is a fundamental component of the flavor profile. The lack of, or excess of, characteristic acidity/sour flavors can be a defect in all cheeses. Also used by some to describe a cheese that has an appropriate amount of acidity but is lacking in other flavor profile components.

Possible cause: pH and water activity can affect how the acidity develops, or doesn't, during the ripening process leading up to evaluation.

Synonym: ACID

Related terms: CHEESY, FERMENTED, LACTIC, SHARP

STORAGE

Definition: Butter sometimes takes on the aroma of items stored in the refrigerator (i.e., a green pepper). The initial aroma may be stale and objectionable, but the aftertaste is typically not.

Styles where it occurs: Butter

Defect: Storage is typically considered a technical defect.

Possible cause: Butter is stored too long in the refrigerator.

Related terms: Lacks freshness, OLD CREAM/OLD MILK, OLD INGREDIENT, Stale

STREUBLE

Definition: Overabundance of small eyes just under the surface of the cheese.

Reference point: The attached image also displays uneven eye distribution, small eyes, irregular, misshapen eyes, and blind areas.



Styles where it occurs: Swiss styles

Defect: When Swiss-type cheeses lack the attractive eye appearance that is expected, they may be downgraded.

Possible cause: Curd is disturbed as it is being pressed under whey

Related terms: CABBAGE, EYES, NESTY, ONE SIDED

SULFIDE

Definition: A typical flavor of sharp/aged Cheddar, sulfides have a flavor reminiscent of hard-boiled eggs or matchsticks.

Reference point: Hard-boiled eggs, Ultra-high treatment processing (UHT) milk

Styles where it occurs: Aged Cheddars

Attribute/Defect: Can be either – certain regions (like the Northeast U.S.) will tend to see this flavor more, but if excessive, it can be considered a defect.

Possible causes: Milk microflora, certain adjunct cultures

Related terms: COOKED, SHARP, Skunky, Sulfur

SWEET

Definition: Basic taste sensation elicited by sugars; some stabilizers are associated with sweetness.

Reference point: 5% sucrose in water

Styles where it occurs: High sweetness is considered a defect in yogurt or cottage cheese; some sweetness is expected in many dairy products (sweetened yogurt, sweet cream butter, mascarpone, etc.).

Attribute/Defect: In most styles it would be considered a positive attribute, unless excessive or especially dominant.

Related terms: CAMEL, COOKED, MALTY, NUTTY, SCORCHED

SWEET HOLES

Definition: Spherical gas holes, glossy in appearance, that are about the size of BB shot.

Reference point:



Styles where it occurs: Swiss styles

Attribute/ Defect: When Swiss-type cheeses lack the attractive eye appearance that is expected, they may be downgraded.

Possible cause: Typically caused by coliforms.

Synonym: GASSY

Related terms: EYES, IRREGULAR EYES, OVERSET, Pinny, Small eyes

SYNERESIS see **FREE MOISTURE/ FREE WHEY**

TEXTURE

Definition: A general term used to describe tactile characteristics of cheese, as well as the structure and composition of the cheese's body. This can be evaluated visually, or by the mouthfeel, or by how it slices, breaks, and cooks. Comments about texture usually include lots of adjectives and descriptive language to communicate its density, moisture level, and friability.

Styles where it occurs: All fermented dairy products

Attribute/Defect: Texture is an important attribute, and defects are related to the style of dairy product.

Possible cause: The texture of a cheese is related to its acidity and proteolysis.

Related terms: Appearance (smooth, rough, OPEN, etc.), CREAMY, CORKY, CURDY, Density (soft, WEAK, firm, hard, etc.), ELASTIC/ELASTICITY, FIRM/TOO FIRM, Friability (CRUMBLY, elastic, etc.), LUMPY, MEALY, Moisture (dry, wet, free, etc.), MOUTHFEEL, PASTY, SHORT, WAXY

TYROSINE CRYSTALS

Definition: Round and crunchy crystals on the surface of and within the body of aged cheese are evidence of proteolysis (i.e., the free amino acid tyrosine) crystallization.

Reference point: Cougar Gold cheese (Washington State University) aged 18 months or more.

Crystals may be seen on the surface but may be calcium lactate crystals; (left image). Crystals within the body of the cheese (right image) are almost always tyrosine crystals.



Styles where it occurs: Aged hard cheeses, including Italian, Gouda, Alpine, Cheddar styles

Attribute/Defect: May be considered a defect if extensive, though aesthetic judges may consider them a positive attribute.

Possible cause: Proteolysis of proteins into peptides, then into the amino acid tyrosine with extensive aging (typically > 1 year).

Related terms: CALCIUM LACTATE is often confused for tyrosine crystals, but tyrosine is only present in aged cheeses.

UMAMI

Definition: The term literally translates to “delicious” in Japanese. It is the meaty/brothy basic taste associated with proteins and amino acids.

Reference point: Monosodium glutamate (MSG) diluted in water, chicken broth without herbs

Styles where it occurs: All fermented dairy products

Synonym: BROTHY, MEATY

Related terms: Protein, Savory

UNDERSET

Definition: Fewer eyes than desired/expected in a cheese expected to have eyes.

Reference point: In addition to blind areas, the image exhibits uneven distribution of eyes and very small eyes.



Styles where it occurs: Swiss styles

Defect: Because some eyes are present, this is not as serious of a defect as other eye defects.

Possible cause: Lack of activity of *Propionibacterium* sp. (eye formers), or inadequate time or temperature in warm room.

Related terms: ATYPICAL, BLIND, EYES, OVERSET, UNEVEN, UNIFORM

UNCLEAN

Definition: Used to describe a general dirty flavor, aroma, or lingering aftertaste. Often used by technical judges to describe volatile aromatics. In Cheddar, it is a complex cheese flavor resulting from the fermentation of whey during the aging process. Can be similar to whey taint, though generally something described as “unclean” will have a longer residual impact on the taster.

Styles where it occurs: Commonly used in Cheddar grading but can be used to describe many styles of aged cheese.

Attribute/Defect: Generally seen as a defect. May be seen in concert with other defects, like high acidity, bitterness, or whey taint. However, because unclean is complex and interesting, it is not always considered a defect.

Possible cause: Whey fermentation, microflora from milk, poor milk quality, using older milk, interaction among pH/moisture/fat/enzymatic activity

Related terms: Aftertaste, ANIMAL, BARNY, BITTER, CHEESY, Complex, Dirty, Finish, OLD CREAM/OLD MILK, OLD INGREDIENT, Putrid, RANCID, WHEY/WHEY TAIN

UNEVEN

Definition: 1) Cheese wheel or block is asymmetrical: higher on one side than on the other side. 2) In Swiss-style cheeses it can be used to refer to cheese where eyes are reasonably developed in some areas and under-developed in other areas.

Reference point:



Styles where it occurs: All in the former; the latter definition refers more to Swiss-style cheese.

Defect: Because some eyes are present, this is not as serious a defect as other eye defects.

Possible causes: 1) Uneven shape would most often be due to improper attention during pressing/turning. 2) Uneven turning, possibly the cheese was dropped, improper molding

Synonym: ONE SIDED

Related terms: COOKED, CROOKED, EYES, Lopsided, Nonhomogeneous, UNDERSET, UNIFORM

UNIFORM

Definition: Cheese has an evenness to it. Can be used to describe the rind, shape, size, and ripening of a cheese, and shape, size and distribution of eyes.

Synonym: BALANCED

Related terms: CROOKED, EYES, Lopsided, ONE SIDED, UNEVEN, Uniform, UNDERSET

VOLATILES

Definition: The experience of flavor through aroma. Aroma is experienced through the volatility of the chemical compounds that are a result of flavor. Volatile chemical compounds – compounds that are able to evaporate – are noted when transported to the olfactory system through smelling or chewing a product. This is experienced through the back of the throat.

Related terms: AROMA, FLAVOR, Fragrance, FRUITY, Retronasal, Volatile Aromas

WAXY

Definition: This term refers to the texture and body of a cheese. When the cheese is worked between the fingers, it molds and forms easily, like wax or even cold butter.

Reference point: Candle wax

Styles where it occurs: Swiss styles, hard styles

Related terms: Body, Smooth, TEXTURE

WEAK

Definition: Refers to 1) yogurt that lacks body, or 2) cheese that does not require much pressure to cause the cheese to become misshapen. This describes the texture, body, and structure of the cheese. A weak cheese may cause the plug to collapse while removing.

Reference point: Cream cheese, marshmallows, light yogurt

Attribute/Defect: Weak is considered a defect when it pronounced or is not typical of the style. *In yogurt:* Product does not stand up in the spoon, and/or may appear watery. *In cheese:* The cheese curd does not hold up when worked between the thumb and fingers. Soft curd may possibly be wet.

Possible causes: *In yogurt:* under-stabilization, low casein or low total milk solids, under incubation, or low pasteurization temperature. *In cheese:* Too much whey in cheese, excess acid, excess fat, low salt, excess proteolysis.

Synonym: Soft

Related terms: Body, CREAMY, PASTY, Rind Rot, SHORT, TEXTURE

WHEY/WHEY TAIN

Definition: 1) Butter: Whey manifests both in flavor and body. The melting properties and flavors are more reminiscent of margarine than butter. 2) Cottage cheese: Excess whey produces a brothy flavor. 3) Cheese: Slight sweet-acidic flavor and odor of fermented whey caused by too slowly or incompletely drained curds. Often the flavor is short-lived, in contrast to a similar flavor you might see in cheese called "unclean".

Reference point: Fermented whey

Styles where it occurs: Cheddar

Attribute/Defect: Generally seen as a defect, though in an aged cheese it can be a component of a complexity of flavor.

Possible causes: 1) Butter: Whey cream is used; 2) Cottage cheese: Curds are not washed adequately before creaming; excess whey is utilized in the cream dressing; 3) Cheese: Residual/retained cheese whey that ferments during the aging process.

Synonym: Whey stain

Related terms: BROTHY, FERMENTED, FRUITY, UNCLEAR

YEAST(Y)

Definition: A distinctive yeast-like aroma is present. Yeasts are an integral part of many rind microflora, but in overabundance could produce an overpowering yeast-like aroma.

Reference point: Rising bread dough, marmite

Styles where it occurs: Natural rind cheeses, bloomy rind cheeses

Attribute/Defect: Yeasty is not objectionable in washed rind cheeses. When observed yogurt, cottage cheese, and other fresh dairy products, yeasty is always a defect. It is often considered a defect in semi-soft and hard styles of cheese as well.

Possible Cause: Yeast contamination and outgrowth

Related terms: FERMENTED, FRUITY, GASSY

LIST OF TERMS IN THE ACS LEXICON & GLOSSARY

A

ACETALDEHYDE
ACID
AFTERTASTE (*See FINISH*)
AMMONIA/AMMONIATED
ANIMAL
APPEARANCE
AROMA
ASTRINGENT
ATYPICAL

B

BALANCED
BARNY
BITTER
BLIND
BLEACHED/BLEACHING
BLOWN
BROTHY
BUTTERY

C

CABBAGE
CALCIUM LACTATE
CARAMEL
CHECKS/CHECKED (*See CRACKED, SLITS*)
CHEESY
CHEMICAL (*See MEDICINAL*)
CLOSED
COARSE
COLLAPSED
COLOR
COLOR LEACHING
COOKED
CORKY
CRACKED/CRACKS
CREAMY (*See BUTTERY*)
CROOKED (*See UNEVEN*)
CRUMBLY
CRYSTALS (*See CALCIUM LACTATE, TYROSINE CRYSTALS*)
CURDY

D

DULL

E

EARTHY
ELASTIC/ELASTICITY
EYES

F

FADED
FEED

F

FERMENTED
FINISH
FIRM/TOO FIRM
FLAT/LACKS FLAVOR
FLAVOR
FOREIGN
FREE CREAM
FREE MOISTURE/FREE WHEY
FROG MOUTH
FRUITY

G

GASSY
GRAINY (*See MEALY*)
GREASY

H

HEAT
HEATED

I

IMMATURE MOLD
IRREGULAR EYES
ITCHY

L

LACTIC
LIPASE (*See RANCID*)
LUMPY

M

MALTY
MATTED
MEALY
MEATY
MEDICINAL
METALLIC
MITES
MOLDY
MOTTLED
MOUTHFEEL
MUSTY (*See MOLDY*)
MUSHROOM(Y)

N

NESTY
NUTTY

O

OLD CREAM/OLD MILK
OLD INGREDIENT
ONE SIDED
OPEN
OVERSET
OVERSTABILIZED
OXIDIZED

P

PASTY
PINKING
PRESENTATION (*See APPEARANCE*)

R

RANCID
RIPE
ROPY
RUBBERY (*See FIRM*)

S

SALT(Y)
SCORCHED
SEAMY
SHARP
SHATTERED CURD
SHORT
SHRUNKEN
SLIP COAT
SLITS
SMOKEY/SMOKY
SOFT (*See WEAK*)
SOUR
STORAGE
STREUBLE
SULFIDE
SWEET
SWEET HOLES
SYNERESIS (*See FREE*)
MOISTURE/FREE WHEY

T

TEXTURE
TYROSINE CRYSTALS

U

UMAMI
UNDERSET
UNCLEAN
UNEVEN
UNIFORM

V

VOLATILES

W

WAXY
WEAK
WHEY/WHEY TAINT

Y

YEAST(Y)

APPENDIX A: QUICK REFERENCE GUIDE

ACETALDEHYDE

Synonyms: Green apple

Related terms: ATYPICAL, Harsh, SHARP

ACID

Synonyms: SOUR

Related terms: ATYPICAL, Bright, CHEESY, Citrus, LACTIC, SHARP, Tangy, Tart

AFTERTASTE see **FINISH**

AMMONIA/AMMONIATED

Synonyms: Catty

Related terms: Over Ripe, RIPE

ANIMAL

Synonyms: Cowy, Goaty, Sheepy

Related terms: BARNY, UNCLEAR

APPEARANCE

AROMA

Related terms: FLAVOR, MOUTHFEEL, VOLATILES

ASTRINGENT

Synonyms: Mouth-drying

ATYPICAL

Related terms: ACETALDEHYDE, ACID (High or Low), COLOR, FLAT, FOREIGN, Lacks FLAVOR, SALT, UNDERSET, Unnatural

BALANCED

Synonyms: UNIFORM

Related terms: EYES, Delicate, Mellow, Smooth, Even

BARNY

Related terms: ANIMAL, Cowy, Funky, UNCLEAR

BITTER

Related terms: RANCID, UNCLEAR

BLIND

Related terms: CLOSED, EYES, UNDERSET

BLEACHED/BLEACHING

Related terms: COLOR, COLOR LEACHING, FADED, Streaking

BLOWN

Related terms: CABBAGE, COLLAPSED, GASSY, OVERSET, Lopsided

BROTHY

Synonyms: Savory, MEATY, UMAMI

Related terms: WHEY

BUTTERY

Synonyms: Diacetyl

Related terms: CREAMY, LACTIC

CABBAGE

Related terms: BLOWN, COLLAPSED, EYES, OVERSET, STREUBLE

CALCIUM LACTATE

Related term: CRYSTALS

CARAMEL

Related term: COOKED, HEATED, SCORCHED, SWEET

CHECKS/CHECKED See **CRACKED, SLITS**

CHEESY

Related terms: ACID, OLD CREAM/OLD MILK, SOUR, UNCLEAR

CHEMICAL See **MEDICINAL**

CLOSED

Related terms: BLIND, EYES, OPEN

COARSE

Related terms: FLAT, High Salt

COLLAPSED

Related terms: BLOWN, CABBAGE, EYES, FROG MOUTH

COLOR

Related terms: ATYPICAL, BLEACHED, Bright, DULL, FADED, PINKING, MOTTLED, OXIDIZED, SEAMY

COLOR LEACHING

Related terms: BLEACHED, MOTTLED

COOKED

Synonyms: HEATED

Related terms: CARAMEL, NUTTY, SCORCHED, SULFIDE, SWEET

CORKY

Synonyms: Tough, Woody

Related terms: CURDY, Dry, GRAINY, Hard, MEALY, TEXTURE

CRACKED/CRACKS

Related terms: CHECKED, CHECKS, Disturbed, Open rind, Picks, SLITS, Splits

CREAMY See **BUTTERY, LACTIC, TEXTURE, WEAK**

CROOKED See **UNEVEN**

CRUMBLY

Synonym: Friable

Related terms: GRAINY, MEALY, SHORT, TEXTURE

CRYSTALS See **CALCIUM LACTATE, TYROSINE CRYSTALS**

CURDY

Related terms: CORKY, MEALY, TEXTURE

DULL

Related terms: COLOR, EYES, FADED, Pale

EARTHY

Related terms: FEED, MOLDY, MUSHROOM

ELASTIC/ELASTICITY

Synonyms: Flexible, Supple

Related terms: PASTY, SHORT, TEXTURE, WEAK

EYES

Related terms: BALANCED, BLIND, CABBAGE, CLOSED, COLLAPSED, DULL, FROG MOUTH, GASSY, IRREGULAR EYES, NESTY, ONE SIDED, OVERSET, STREUBLE, SWEET HOLES, UNDERSET, UNIFORM

FADED

Related terms: BLEACHED, COLOR, DULL, PINKING, OXIDIZED

FEED

Related terms: Alfalfa, EARTHY, Garlic, Grassy, Green, Onion

FERMENTED

Related terms: FRUITY, GASSY, SOUR, WHEY/WHEY TAIN, YEASTY

FINISH

Related terms: AFTERTASTE, FLAVOR

FIRM/TOO FIRM

Synonym: Rubbery (in cottage cheese)

Related terms: GRAINY, LUMPY, MEALY, OVERSTABILIZED, TEXTURE, Tough, Woody

FLAT/LACKS FLAVOR

Related terms: ATYPICAL, COURSE

FLAVOR:

Related terms: AROMA, ATYPICAL, Excess, FINISH, Unbalanced, VOLATILES

FOREIGN

Related terms: ATYPICAL, Chemical, MEDICINAL, METALLIC

FREE CREAM

Related terms: FREE WHEY

FREE MOISTURE/FREE WHEY

Synonyms: Syneresis

Related terms: FREE CREAM, SHRUNKEN, Weeping, Weepy

FROG MOUTH

Related terms: COLLAPSED, EYES, IRREGULAR EYES, OPEN

FRUITY

Related terms: FERMENTED, Green, VOLATILES, WHEY/WHEY TAINT, YEASTY

GASSY

Synonym: OVERSET, Pin holes, SLITS, SWEET HOLES

Related terms: BLOWN, Bloating, EYES, FERMENTED, Huffed, YEASTY

GRAINY See MEALY**GREASY**

Related terms: SEAMY

HEAT

Synonyms: Burn, Itchy, Prickly, Spicy, Tingly

HEATED

Synonyms: COOKED

Related terms: CARAMEL, SCORCHED, VOLATILES

IMMATURE MOLD

Related terms: Unripe

IRREGULAR EYES

Related terms: EYES, FROG MOUTH, Misshapen eyes, NESTY, SWEET HOLES

ITCHY

Related terms: Burn, Prickly, HEAT

LACTIC

Related terms: ACID, Buttermilk, BUTTERY, CREAMY, Milk Fat, Milky, SOUR

LIPASE See RANCID**LUMPY**

Synonyms: MATTED, TOO FIRM

Related terms: Gel-like TEXTURE

MALTY

Related terms: SWEET

MATTED

Synonyms: Clumped, LUMPY

MEALY

Synonym: GRAINY

Related terms: CORKY, CRUMBLY, CURDY, FIRM, Gritty, Sandy

MEATY

Synonyms: BROTHY, Savory, UMAMI

MEDICINAL

Related terms: CHEMICAL, FOREIGN, METALLIC

METALLIC

Synonym: Copper, FOREIGN, Iron, MEDICINAL, "Tin Can" Flavor

MITES

Synonym: Mite-damaged, Mitey

MOLD, IMMATURE see IMMATURE MOLD**MOLDY**

Related terms: EARTHY, MUSTY

MOTTLED

Synonym: Splotchy

Related terms: COLOR, COLOR LEACHING, GREASY, Uneven coloring, Wavy

MOUTHFEEL

Related terms: AROMA, Astringency, GRAINY, MEALY, PASTY, Puckering, OVERSTABILIZED, Smooth, TEXTURE, Volatiles

MUSTY See MOLDY**MUSHROOM(Y)**

Related terms: EARTHY

NESTY

Related terms: EYES, IRREGULAR EYES, ONE SIDED, STREUBLE

NUTTY

Related terms: COOKED, SWEET

OLD CREAM/OLD MILK

Related terms: CHEESY, OLD INGREDIENT, Stale, STORAGE, UNCLEAR

OLD INGREDIENT

Related terms: OLD CREAM/OLD MILK, Stale, STORAGE, UNCLEAR

ONE SIDED

Synonym: UNEVEN

Related terms: EYES, NESTY, STREUBLE, UNDERSET, UNIFORM

OPEN

Related terms: CHECKED, CLOSED, CRACKED, FROG MOUTH, Loose knit

OVERSET

Synonym: GASSY

Related terms: BLOWN, EYES, CABBAGE, UNDERSET

OVERSTABILIZED

Related terms: FIRM, MOUTHFEEL, Slick, Slimy

OXIDIZED

Synonym: PINKING

Related terms: COLOR, FADED

PASTY

Synonym: Sticky

Related term: ELASTIC/ELASTICITY, MOUTHFEEL, Soft, TEXTURE, WEAK, Wet

PINKING

Synonym: OXIDIZED

Related terms: COLOR, FADED

PRESENTATION See **APPEARANCE**

RANCID

Related terms: baby vomit, BITTER, goaty, LIPASE, piquant, soapy, UNCLEAR

RIPE

Related terms: À point, AMMONIA/AMMONIATED, Over ripe, Under ripe

ROPY

Related terms: Stringy, slick, slimy

RUBBERY see **FIRM**

SALT(Y)**SCORCHED**

Related terms: CAMEL, Caramelized, COOKED, SWEET

SEAMY

Related terms: COLOR, GREASY, MOTTLED

SHARP

Related terms: ACETALDEHYDE, ACID, Piquant, SOUR, SULFIDE

SHATTERED CURD

Related terms: Non-uniform

SHORT

Related terms: CRUMBLY, Dry, ELASTIC/ELASTICITY, TEXTURE, WEAK

SHRUNKEN

Related terms: FREE WHEY

SLIP COAT

Related terms: Peau de Grenouille, Slip skin, Slip rind

SLITS

Synonym: GASSY

Related terms: CHECKS/CHECKED, CRACKS, Fish Eyes, Picks, Splits

SMOKEY/SMOKY

SOFT See **WEAK**

SOUR**Synonym:** ACID**Related terms:** CHEESY, FERMENTED, LACTIC, SHARP**STORAGE****Related terms:** Lacks freshness, OLD CREAM/OLD MILK, OLD INGREDIENT, Stale**STREUBLE****Related terms:** CABBAGE, EYES, NESTY, ONE SIDED**SULFIDE****Related terms:** COOKED, SHARP, Skunky, Sulfur**SWEET****Related terms:** CARAMEL, COOKED, MALTY, NUTTY, SCORCHED**SWEET HOLES****Related terms:** EYES, IRREGULAR EYES, OVERSET, Pinny, Small eyes**SYNERESIS** see **FREE MOISTURE/ FREE WHEY****TEXTURE****Related terms:** Appearance (smooth, rough, OPEN, etc.), CREAMY, CORKY, CURDY, Density (soft, WEAK, firm, hard, etc.), ELASTIC/ELASTICITY, FIRM/TOO FIRM, Friability (CRUMBLY, elastic, etc.), LUMPY, MEALY, Moisture (dry, wet, free, etc.), MOUTHFEEL, PASTY, SHORT, WAXY**TYROSINE CRYSTALS****Related terms:** CALCIUM LACTATE is often confused for tyrosine crystals, but tyrosine is only present in aged cheeses.**UMAMI****Synonym:** BROTHY, MEATY**Related terms:** Protein, Savory**UNDERSET****Related terms:** ATYPICAL, BLIND, EYES, OVERSET, UNEVEN, UNIFORM**UNCLEAN****Related terms:** Aftertaste, ANIMAL, BARNY, BITTER, CHEESY, Complex, Dirty, Finish, OLD CREAM/OLD MILK, OLD INGREDIENT, Putrid, RANCID, WHEY/WHEY TAIN**UNEVEN****Synonym:** ONE SIDED**Related terms:** COOKED, CROOKED, EYES, Lopsided, Nonhomogeneous, UNDERSET, UNIFORM**UNIFORM****Synonym:** BALANCED**Related terms:** CROOKED, EYES, Lopsided, ONE SIDED, UNEVEN, Uniform, UNDERSET**VOLATILES****Related terms:** AROMA, FLAVOR, Fragrance, FRUITY, Retronasal, Volatile Aromas**WAXY****Related terms:** Body, Smooth, TEXTURE**WEAK****Synonym:** Soft**Related terms:** Body, CREAMY, PASTY, Rind Rot, SHORT, TEXTURE**WHEY/WHEY TAIN****Synonym:** Whey stain**Related terms:** BROTHY, FERMENTED, FRUITY, UNCLEAR**YEAST(Y)****Related terms:** FERMENTED, FRUITY, GASSY

APPENDIX B: ADJECTIVES COMMONLY USED IN EVALUATION

Appealing	Enjoyable	Pleasing
Approachable	Even	Rustic
Artisan	Interesting	Satisfying
Attractive	Intriguing	Smooth
Balanced	Long	Spicy
Classic	Nice	Traditional
Clean	Nuanced	Symmetrical
Complex	Pastoral	Uniform
Desirable	Piquant	
Delicate	Pleasant	

BIBLIOGRAPHY

- Clark, S., M. Costello, M.A. Drake, and F. Bodyfelt, eds. *The Sensory Evaluation of Dairy Products*. 2nd ed. Springer, 571 pages, 2008.
- Singh, T. K., M.A. Drake, and K. R. Cadwallader. Flavor of Cheddar Cheese: A Chemical and Sensory Perspective. *Comprehensive Reviews in Food Science and Food Safety* 2, no. 4 (2003): 166–189.
- Hassan, F. A. M., M.A.M. Abd El- Gawad, and A.K. Enab. (2012). Flavour compounds in cheese (review). *International Journal of Academic Research*. 4. 169-181.
https://www.researchgate.net/publication/272878014_Flavour_compounds_in_cheese_review
- Kaylegian, K., and L. Caprera. Cheese Tracking System: Sensory Evaluation Guide. Penn State Extension, 2017. <https://extension.psu.edu/cheese-tracking-system>.
- Kosikowski, F.V., and V. Mistry. *Cheese and Fermented Milk Foods, Vol. 1*. F.V. Kosikowski (1997), Edition: 3rd, 729 pages, 1997.
- Kosikowski, F. V., and V. Mistry. . *Cheese and Fermented Milk Foods, Vol. 2*. F.V. Kosikowski (1997), Edition: 3rd, 330 pages, 1997.
- Lawless, H. T., and H. Heymann. *Sensory Evaluation of Food: Principles and Practices*. New York: Springer, 2010. <http://site.ebrary.com/id/10421269>.
- Polowsky, P. "Cheese Science Toolkit." 2018. Available at: www.cheesescience.org.
- Talavera, M., and D. H. Chambers. Flavor Lexicon and Characteristics of Artisan Goat Cheese from the United States. *Journal of Sensory Studies* 31, no. 6 (December 1, 2016): 492–506. Available at: <https://doi.org/10.1111/joss.12239>.
- USDA Agricultural Marketing Service. Dairy Products. Agricultural Marketing Service. Accessed December 22, 2016. Available at: <https://www.ams.usda.gov/grades-standards/dairy-products>.
- Wilster, G. H.. *Practical Cheesemaking*. O.S.U. Book Stores, 440.1974.
- Wisconsin Statute. Cheese Grading, Packaging, and Labelling, ATCP 81.01 35.93 §. Accessed January 3, 2018. Available at: https://docs.legis.wisconsin.gov/code/admin_code/atcp/055/81.
- International Organization for Standardization. ISO 5492:2008(En), Sensory Analysis — Vocabulary. Accessed January 16, 2018. Available at: <https://www.iso.org/obp/ui/#iso:std:iso:5492:ed-2:v1:en>.