

MILK FLAVOR IDENTIFICATION AND EVALUATION (50 POINTS)

For each sample, write the flavor score and place a check mark under the defect.

Sample	Score (1-10)	Acid	Bitter	Feed	Flat/Watery	Foreign	Garlic/Onion	Malty	Oxi-dized	Rancid
1										
2										
3										
4										
5										

- Ten milk samples will be scored on flavor defect (taste and odor) using the computerized scorecard. Check only the most serious defect in a sample even if more than one flavor is detected (all samples of milk are prepared from pasteurized whole vitamin D milk intended for table use). Milk samples will be tempered to 60°F. Only those cups provided at the event may be used. (Six points per correct answer.)
- Participants are to use whole numbers when scoring “Defect Intensity”. If no defect is noted, participants should check, “No defect” and score as a ten (See Scoring Guide below). (Six points per correct answer.)

Scoring Guide

Refer to the current scorecard being used at the national level. Scores may range from 1 to 10. On a quality basis:

10	excellent (no defect)
8 to 9	good
5 to 7	fair
2 to 4	poor
1	unacceptable/un-salable

Cheese Characteristics Matrix

A description of major varieties of cheeses popular among American consumers.

VARIETY	Moisture (%) (Maximum) ¹	Fat (%) (Minimum) ²	Pasta Filata ³	Brine/surface Salted	Ripened by	Origin
Blue/Bleu	46	50	no	yes	mold	France
Brie	52.5	20	no	no	bacteria and mold	France
Cheddar Mild	39	50	no	no	bacteria	England
Cheddar Sharp	39	50	no	no	bacteria	England
Colby	40	50	no	no	bacteria	US
Cream	55	33	no	no	unripened	US
Feta	60	42	no	yes	bacteria	Greece
Gouda	45	48	no	yes	bacteria	Netherlands
Havarti	54	30	no	no	bacteria	Denmark
Gruyere	39	45	no	yes	bacteria	Switzerland
Monterey Jack	44	50	no	no	bacteria	US
Mozzarella	60	45	yes	yes	bacteria	Italy
Muenster	46	50	no	no	bacteria	France
Parmesan	32	32	no	yes	bacteria	Italy
Processed American	40	50	no	no	bacteria	US
Provolone	45	45	yes	yes	bacteria	Italy
Queso Fresco	59	18	no	no	unripened	Mexico
Ricotta	73	4	no	no	unripened	Italy
Romano	34	38	no	yes	bacteria	Italy
Swiss	41	43	no	yes	bacteria	Switzerland

¹Some cheeses have a range in moisture permitted, but these are the highest permitted amounts.

²Some cheese standards use percentage by weight of total solids (e.g., cheddar) while others use percentage by weight of the cheese (e.g., cream).

³Curd is stretched in hot water to align the protein molecules and provide stretch to the curd

Cheese Identification (50 Points)

For each sample, write the variety of cheese and identify the characteristics of that variety.

VARIETY	Moisture (%) (Maximum)1	Fat (%) (Minimum)2	Pasta Filata3	Brine/surface Salted	Ripened by	Origin
1.						
2.						
3.						
4.						
5.						

Milk Fat Content (30 Points)

Write the correct name/milk fat content for each of the samples provided.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

nonfat (skim) milk
nonfat 1%
reduced fat milk (2%)
milk (3.3%)
half and half (10.5%)
coffee cream (18%)
buttermilk
whipping cream (30%)

References

This list of references is not intended to be all-inclusive.

- Other sources may be utilized and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation.
- National FFA National Career Development Event Questions and Answers FFA.org
- Hoard's Dairyman, P.O. Box 801, Fort Atkinson, Wisconsin 53538. Phone (414) 563-5551. Issues used are from November of previous year to May of current year.
- California Mastitis Test published by the University of Missouri-Columbia Extension Division, Columbia, Missouri 65211. (Single copy free, write for price quote for multiple copies).
- California Mastitis Test kit can be ordered from NASCO. Toll free 1-800-558-9595 or toll call, 1-414-563-2446. NASCO, 901 Janesville Avenue, Fort Atkinson, WI 53538.
- Dairy Business <http://dairybusiness.com/> 7. Agricultural Marketing Service – <http://www.ams.usda.gov/AMSV1.0/DairyLandingPage>
- Dairy Foods: Producing the Best, Dr. Robert Marshall; Instructional Materials Laboratory <http://dass.missouri.edu/aged/resources/dairy-foods-booklet.pdf>
- The Dairy Practices Council: Guidelines www.dairypractices.org
 - #21 – Raw Milk Quality Tests
 - #24 – Troubleshooting High Bacteria Counts of Raw Milk
 - #38 – Preventing Off-Flavors in Milk
 - #71 - Prevention of and Testing for Added Water in Milk
 - #98 – Milking Procedures for Dairy Cattle
- Pasteurized Milk Ordinance <http://www.idfa.org/docs/default-source/news-files/2013-pmo-final.pdf?sfvrsn=0>
 - SECTION 1. DEFINITIONS
 - SECTION 6. THE EXAMINATION OF MILK AND/OR MILK PRODUCTS
 - SECTION 7. STANDARDS FOR GRADE "A" MILK AND/OR MILK PRODUCTS
 - ITEM 15p. PROTECTION FROM CONTAMINATION
 - APPENDIX E. EXAMPLES OF 3-OUT-OF-5 COMPLIANCE ENFORCEMENT PROCEDURES
 - APPENDIX G. CHEMICAL AND BACTERIOLOGICAL TESTS
 - APPENDIX K. HACCP PROGRAM
 - APPENDIX N. DRUG RESIDUE TESTING AND FARM SURVEILLANCE
 - **NOTE:** In the document items followed by a "p" referred to the Pasteurized side, items followed by an "r" refer to the Raw side.
- Code of Federal Regulations Title 21, Part 133 – Cheeses and Related Cheese Products <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=133>
- Code of Federal Regulations Title 21, Part 131 – Milk and Cream <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=131>