

TABLE 31.7 Classification of Cheeses According to Ottogalli (1998, 2000a,b, 2001)

Group	Class	Family	Description	Examples
Lactinia	Class A: fresh cheeses, rarely ripened	1	Yogurt-like product, but with loss of some whey	Lebneh (Middle East); Fromage blanc (Switzerland, France); Sauermilchkäse, Quarg (Germany)
		2	Milk coagulated by addition of organic acid	Queso Blanco (Latin America); Cottage (UK, USA); Quarg (Germany); Tvorog (Poland)
		3	Acid addition and heating of whey (goat or ewe)	Whey cheese (UK); Ricotta (Italy); Mizithra (UK); Manouri (Former Yugoslavia); Brunost, Getost (Norway)
		4	Acid addition and heating of whey (cow)	Whey cheese (UK); Ricotta (Italy); Ziger (Germany); Mysost (Norway)
		5	Acid addition and heating of cream	Mascarpone (Italy)
		6	Acid addition and heating of buttermilk	Skyr (Iceland); Karish (Egypt); Buttermilk, Quark (Germany); Aoules (Algeria);
		7	Acid addition and heating of colostrum or beestings	Kolostrumkase (Germany); Sa Casada (Italy), Armada (Spain)
Formatica	Class B: fresh cheeses (unripened). Interior: soft, exterior: rindless, ripening: absent. IM = 2–5, IL = 1–2	1	Acid-rennet coagulation	Petit Suisse, Pates fraiches (France); Frischkase Quargel (Germany); Cream cheese (USA)
		2	Rennet-acid coagulation	Gervais™ (Germany); Jonchée, Caillebotte (France); Primo sale (Italy)
		3	Goat or sheep	Caprino (Italy); Goat cheese (UK); Cadiz, Soria, Villeria (Spain); Bruscion (Switzerland)
		4	Fresh kneaded or plastic or stretched cheeses	Mozzarella di bufala, Fiordilatte (Italy); Oaxaca (Mexico); Pizza cheese (America)
		5	Coagulum cut into cubes and/or flakes cooked, drained, washed and water cooled	Cottage (UK, USA); Huttenkase (Germany); Farkost (Sweden)
Formatica	Class C: short ripened cheeses. Interior: soft, exterior: usually rindless or thin rind. IM = 2–10, IL = 1–5	1	Rindless, very short ripening phase	Crescenza (Italy); Butterkase (Austria); Cremoso (Argentina)
		2	Thin rind, short ripening (<1 month)	Caciotta, Italico, Bel Paese™ (Italy); St. Paulin, Port Salut™ (France); Tetilla (Spain); Passendale (Belgium); Caerphilly (UK); Richelieu (Canada)
		3	Same as C1 or C2 but from goat or ewe's milk	Burgos, Azeitao, Puzol, Villalon (Spain); Capricorn goat (UK); Robiola di Roccaverano (Italy)
		4	Kneaded curds	Scamorza (Italy); Cascaval (Romania); Ostiepok (Czech Republic)
		5	White brined	Feta (Greece); Teleme (Romania); Domiati (Egypt); Brinza (Israel); Peynaz peynir (Turkey); Surati panir (India); Halloumi (Cyprus); Lightvan (Iran)
Formatica	Class D: soft, surface-ripened cheeses. Interior: soft, exterior: felt of mold or smear. IM = 25–35, IL = 10–15	1	White molded rind	Camembert, Caprice de Dieux, Brie, Coulommiers, Chource, Carré de l'Est (France); Bouchester (UK); Tomme de Vadois (Switzerland); Casanova (Denmark); Scimudin (Italy)
		2	Smear surface	Romadour (Belgium); Brick, Liederkrantz (USA); Havarti, Esrom (Denmark); Epoisses, Langres, Livarot, Maroilles, Munster (France); Kernhem (the Netherlands); Ridder (Norway); Vacherin Mont d'Or (Switzerland); Limburger (Germany)
		3	Same as D1 or D2 or D4 but goat or ewes' milk	Crottin, Chabichou, Bouche de Chèvre, Pouligny, Saint Maure, Rocamadour (France); Altenburger (Germany); Capricorn goat (UK)
		4	Mold-ripened (white or blue) and smeary surface	Taleggio, Quartirollo, Robiola (Italy); Chaumes, Pont l'Eveque, Reblochon (France)

(Continued)

TABLE 31.7 Classification of Cheeses According to Ottogalli (1998, 2000a,b, 2001) (*cont.*)

Group	Class	Family	Description	Examples
Formatica	Class E: blue-veined cheeses. Interior: soft to semisoft, blue veins, exterior: soft rind with felt or smear. IM = 60–70, IL = 10–15	1	Cow's milk	Buxton Blue, Stilton, Dovedale (UK); Gorgonzola (Italy); Danablu, Mycella (Denmark); Bergader (Germany); Gammelost (Norway); Adelost (Sweden); Bleu d'Auvergne, Bleu de Causses, Bleu de Gex, Bleu de Laqueille, Fourme d'Aubert (France); Cashel Blue (Ireland)
		2	White molded rind	Bleu de Bresse (France); Cambozola (Germany)
		3	Ewe's or goats'	Roquefort (France); Cabrales (Spain); Kopanisti (Greece); Castelmagno, Murianengo (Italy)
Formatica	Class F: semihard cheeses. Interior: semihard, exterior: hard rind. IM ¹ = 10–15 (or depending on family), IL ² = Depends on family	1	Untextured, usually semicooked and pressed	Montasio, Raschera, Bettelmatt (Italy); Pinzgauer (Austria); Beaumont, Laguiole, Muro (France); Raclette (Switzerland); Trappisten (Germany)
		2	Washed curd (eyes caused by citrate metabolism or heterolactic bacteria)	Edam, Gouda (the Netherlands); Fontal (Italy); Mimolette (France); Blarney (Ireland)
		3	Same as F1 but from goats' or ewes' milk	Serra (PR); Orduna, Mahon (Spain); Ossau-Iraty (France); Pecorini: Pecorino Toscano, Canestrato (Italy); Altemburger (Germany)
		4	Kneaded curds ("pasta filata")	Caciocavallo (Italy); Ostwepock, Kasseri (Greece); Oaxaca (Mexico)
		5	Propionic cheeses. Big round eyes	Maasdamer (the Netherlands); Fol Epi (France); Jarlsberg (Norway); Samsøe (Denmark); Pategras, Colonia (Argentina)
		6	Textured (and dry salted) curd	Lancashire, Colby (UK). Leiden (the Netherlands), Monterey (USA)
		7	Smear rind	Fontina (Italy); Tilsit (Germany); Appenzeller (Switzerland); Stinking Bishop (UK)
Formatica	Class G: hard and extra-hard cheeses. Interior: hard, exterior: hard rind, long ripened. IM = Depends on family, IL = Depends on family	1	Untextured, usually cooked and pressed	Asiago d'Allevo, Grana (Italy); Reggianito (Latin America); Sbrinz (Switzerland)
		2	Washed curd, long ripened	Edam, Gouda (the Netherlands)
		3	Same as G1 but goat or ewes' milk	Pecorino Romano, Pecorino Sardo (Italy); Kefalotiri (Greece); Manchego, Idiazabal (Spain); Ras (Egypt)
		4	Kneaded curds ("pasta filata")	Provolone (Italy); Parenica (Russia); Kashkaval (Bulgaria); Kasar peyniri (Turchia)
		5	Cheeses with eyes	Emmental (Switzerland, France); Svembo, Danbo (Denmark); Kefalograviera (Greece)
		6	Textured (and dry salted) curd ("Cheddar")	Cantal (France); Cheddar, Cheshire, Derby, Single Gloucester, Double Gloucester (UK); Monterey (USA)
		7	Smear rind. The microbial coat provokes strong aroma and smell	Gruyère (Switzerland, France); Puzzone di Moena (Italy); Tete de Moine (Switzerland)
Miscellanea	Class H: cheeses made using various technologies	1	Melted	Processed cheese, Spread cheese, Sottilette™
		2	Smoked	Oak-smoked Cheddar (UK)
		3	Grated or fractionated	"Grating cheeses"
		4	Mixed with other ingredients (fruit, vegetables, spices)	Friesian Clove cheese (NL); Sage Derby (UK); Kummelkasé, Käse mit Champignons (Germany); Sapsago (Switzerland); Ciboulette (France)
		5	Ripened or kept under particular conditions. that is "Pickled cheeses"	Devon Garland (UK); Bruss (Italy); Kopanisti (Greece); Tupi (Spain); Fromage fort (France)
		6	Obtained using special technologies (i.e., ultrafiltration, sterilization, or finished cheese)	Philadelphia™ (USA); Belgioioso™ (Italy)
		7	Products similar to cheese and with nondairy ingredients	"Imitation cheeses," filled cheeses

Index of maturation (IM) = soluble N × 100/total N. Index of lipolysis (IL) = free fatty acids × 100/total fat.




















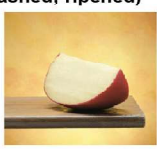




		Milk derived			Whey
A	"Lacticinia" fresh or ripened (soft or hard)	A1 Lebneh 	A2 Quarg 	A3 Ricotta (goat or sheep) 	
		B	B	B	
B	Fresh cheeses (soft)	B1 Petit Suisse (acid curd) 	B2 Primo sale (presamic curd) 	B3 Caprino (goat or sheep) 	
		C	C	C	
C	Short-ripened cheeses (soft)	C1 Crescenza 	C2 Asiago Pressato 	C3 Caciotta (goat or sheep) 	
		D	D	D	
D	Surface-ripened cheeses (soft)	D1 Camembert (white molded rind) 	D2 Livarot (smeared surface) 	D3 Tronchetto Di Capra (goat or sheep; smeared or molded rind) 	
		E	E	E	
E	Blue-veined cheeses (soft)	E1 Stilton (cow) 	E2 Cambozola (white rind) 	E3 Roquefort (goat or sheep) 	
		F	F	F	
F	Semihard cheeses	F1 Montasio (semicooked) 	F2 Fontal (washed curd) 	F3 Canestrato (goat or sheep; ripened) 	
		G	G	G	
G	Hard cheeses	G1 Grana (cooked; ripened) 	G2 Edam (washed; ripened) 	G3 Pecorino (goat or sheep; ripened) 	
		H	H	H	
H	"Miscellanea"	H1 Processed cheeses (melted cheeses) 	H2 Smoked 	H3 Grated 	

FIGURE 31.4 Examples of cheese from the principal groups of Ottogalli (1998, 2000a,b, 2001); see Table 31.7 for further details.




















derived	Cream derived	Buttermilk derived	Colostrum derived		
A4 Ricotta (cow) 	A5 Mascarpone 	A6 SKYR (Not available)	A7 Kolostrum kaese (Not available)	Lactinia	
B4 Mozzarella (plastic or kneaded; cow or buffalo) 	B5 Cottage (cubes or flakes) 				Formatica
C4 Scamorza (plastic or kneaded curd) 	C5 Feta (kept under salt) 				
D4 Taleggio (smeared or moulded rind) 					
F4 Caciocavallo (kneaded curd; ripened) 	F5 Maasdamer (cheese with eyes; ripened) 	F6 Cantal (structured; ripened) 	F7 Fontina (smeared rind; ripened) 	Miscellanea	
G4 Provolone (kneaded curd; ripened) 	G5 Emmental (cheese with eyes; ripened) 	G6 Cheddar (structured; ripened) 	G7 Appenzeller (smeared rind; ripened) 		
H4 Mixed (different ingredients) 	H5 Fromages fort (ripened in special conditions) 	H6 Special technology cheeses 	H7 Imitation cheeses (vegetable origin) 		

FIGURE 31.4 (cont.)