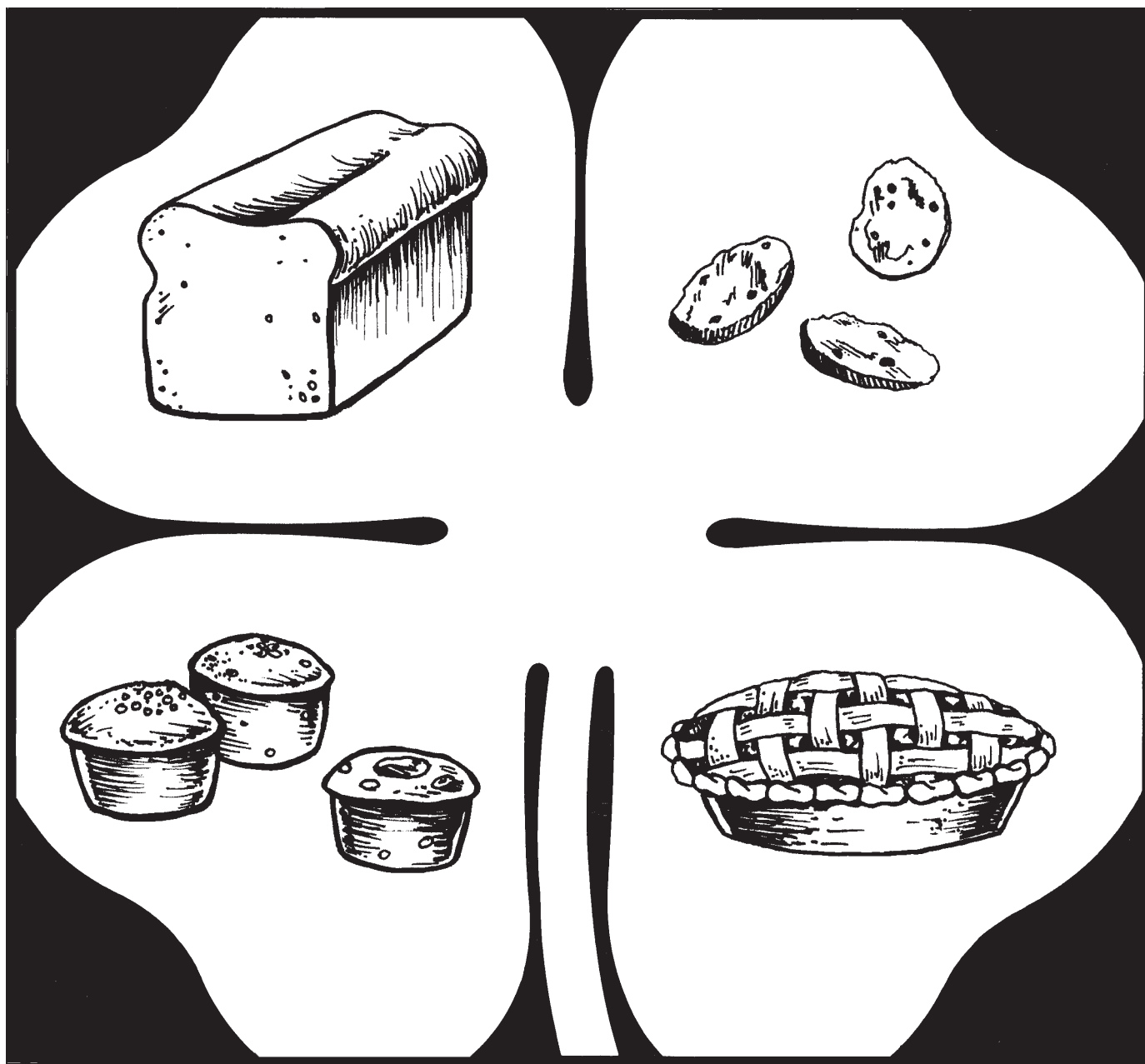


4-H SUPPLEMENTAL MATERIAL



JUDGING BAKED PRODUCTS

Judging Baked Products

Sandra Garl Brown

Quality baked products must look and taste good. Recognizing excellence and knowing what went wrong are important in judging baked products.

Baked products are evaluated on characteristics of appearance, texture, and flavor.

APPEARANCE refers to the size, shape, color, and condition of the outside surface and interior color.

TEXTURE refers to product structure. This is the size of gas holes, thickness of cell walls, and crumb texture.

FLAVOR is product taste and aroma.

Common procedures, though, can result in problems in any baked product:

DARK EXTERIOR	Overbaked; oven temperature too hot; poor circulation of heat.
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DARK BOTTOM	Dark pan used (absorbs heat quicker); poor heat circulation; product placed too low in the oven.
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PEAKED TOP	Inaccurate measuring (too much flour); too much batter in pan; overmixing.
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TUNNELS	Overmixing.
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TOUGH/COARSE TEXTURE	Overmixing/overkneading; too much flour.
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OFF FLAVOR	Rancid fat; improper ingredients or measuring; ingredient missing.
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MICROWAVE BAKING

Even though alterations in recipes and baking procedures are made when baking in the microwave, the color and texture of the product will be different from that baked in a conventional oven. The differences affect the quality.

Here are some common differences.

COLOR	Pale all over unless product uses whole wheat or chocolate.
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TEXTURE	No crust formation; doughy and sticky on the outside; coarse texture; often tough due to overbaking.
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SURFACE	Not level—may have high and low spots
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The author was formerly Extension Family Living Agent/Chair in Cowlitz/Wahkiakum counties.

The following charts tell what to look for in various baked goods, and how to correct problems that might occur. These standards are designed for products made with refined grains. Breads made with whole grain flours will be heavier and coarser. The color will also be darker. This is acceptable.

QUALITY STANDARDS

APPEARANCE	TEXTURE	FLAVOR
Muffins		
TOP Cauliflower-like, rough and pebbled Thin; slightly rounded EXTERIOR Golden brown Uniform size and shape INTERIOR Distinctive of ingredients	GAS HOLES Medium and evenly distributed CELL WALLS Tender Medium	Bland to slightly sweet
Biscuits		
TOP Pale golden brown; flat and slightly rough EXTERIOR Sides straight INTERIOR Creamy white	GAS HOLES Small CELL WALLS Thin Crisp outer crust Thin crust on top and bottom Slightly moist crumb Interior should peel in thin sheets	Bland, mild, and delicate
Quick Breads		
TOP Rough with a slight sheen; may have a shallow length wise crack EXTERIOR Straight sides Even browning distinctive of variety INTERIOR Distinctive of variety	GAS HOLES Medium and evenly distributed CELL WALLS Medium Thin crust INTERIOR Moist and tender	Delicate and mild, distinctive of ingredients
Yeast Breads		
TOP Golden brown Evenly round and smooth Crust 1/8" thick EXTERIOR Sides pale brown Even "shred" INTERIOR Creamy white or distinctive of ingredients Light in weight in proportion to size	GAS HOLES Small to medium and evenly distributed CELL WALLS Thin TOP Crisp and tender INTERIOR Moist and resilient	Sweet, nutty; slight yeast aroma

APPEARANCE	TEXTURE	FLAVOR
Pies		
<p>CRUST Delicate brown Rough surface with small blisters 1/8 to 1/4" thick</p> <p>FRUIT FILLING Fruit intact; as placed in pie Filling retained in pie At least 3/4" high</p>	<p>FLAKINESS Medium; layers are evident Very tender</p> <p>OVERALL TEXTURE Tender and soft Juice smooth and thick like a soft pudding</p>	<p>Bland, distinctive of fat used</p> <p>Distinctive of fruit used; mild spice flavor</p>
Shortened Cakes		
<p>TOP CRUST Slightly rounded near center</p> <p>EXTERIOR Pale to golden brown Light in weight in proportion to size</p> <p>INTERIOR Color distinctive of ingredients used</p> <p>DEVIL'S FOOD Interior mahogany red</p>	<p>GAS HOLES Small and evenly distributed</p> <p>CELL WALLS Very thin</p> <p>CRUMB Very smooth, slightly moist; "velvety"</p> <p>DEVIL'S FOOD CRUMB Slightly coarse and dry</p>	<p>Sweet, mild flavor; a butter flavor may emerge if butter used</p> <p>DEVIL'S FOOD Slightly sweet and flavor of chocolate</p>
Angel Cake		
<p>TOP Slightly rounded</p> <p>EXTERIOR Golden to medium brown Rough and slightly cracked</p> <p>INTERIOR Very white unless other distinctive ingredient used</p>	<p>AIR CELLS Vary in size; small to medium</p> <p>CELL WALLS Very thin</p> <p>CRUMB Tender, "melt in mouth"</p>	<p>Slightly sweet; vanilla or almond flavor apparent</p>
Sponge Cake		
<p>TOP Slightly rounded</p> <p>EXTERIOR Light golden brown Rough and slightly cracked</p> <p>INTERIOR White to yellow unless other distinctive ingredient used</p>	<p>AIR CELLS Fairly small; uniformly distributed</p> <p>CELL WALLS Fairly thin</p> <p>CRUMB Tender</p>	<p>Delicate lemon flavor when lemon flavor used; slight egg flavor detected if lemon not used; slightly sweet taste</p>
Cookies		
<p>TOP Rough; some rounded and smooth, depending on ingredients</p> <p>EXTERIOR Uniform size and shape Delicate brown top and bottom; no flour streaks</p>	<p>DROP AND BAR Soft, chewy; interior tender</p> <p>REFRIGERATOR Crisp, crunchy</p> <p>ROLLED Crisp exterior with tender moist interior</p>	<p>Sweet; mild, characteristic of ingredients</p>

PROBLEMS AND THEIR CAUSES

APPEARANCE	TEXTURE	FLAVOR
Muffins		
PEAKED TOP Inaccurate measuring Too much flour; too much batter in pan or too small pan Overmixing SMOOTH, DULL SURFACE Overmixing "WAXY CRUST" Too much egg Uneven mixing	TOUGH COARSE TEXTURE Overmixing Inaccurate measuring (too much flour) TUNNELS Overmixing Batter too deep	OFF FLAVOR Inaccurate measuring Rancid fat
Biscuits		
UNEVEN SHAPE Careless portions Overmixing DARK BOTTOM Dark pan used for baking; poor heat circulation BROWN FLECKS Undermixed Undissolved baking soda on top LOW VOLUME Not enough leavening Too much shortening Too much mixing	TOUGH BREAD CRUMB Inaccurate measuring Too much flour COMPACT, TOUGH CRUMB Overmixing THICK CRUST Oven too cool HEAVY Too little leavening Too much mixing Too much flour Lack of shortening Too much liquid NOT FLAKY Too little shortening Too much/little mixing of shortening with flour	OFF FLAVOR Rancid fat BITTER Excess or undissolved baking soda
Quick Breads		
PEAKED TOP Inaccurate measuring Too much flour Too much batter in pan or too small pan Overmixing SMOOTH, DULL SURFACE Overmixing DEEP CRACKS Baked too rapidly Oven not preheated	HEAVY, COMPACT TEXTURE Underbaked Inaccurate measuring STICKY, SUGARY SURFACE Inaccurate measuring Improper cooling COARSE, TOUGH TEXTURE Overmixing Inaccurate measuring TUNNELS Overmixing Batter too deep	OFF FLAVOR Rancid fat Inaccurate measuring Stale ingredients
Yeast Breads		
MISSHAPEN LOAF Inaccurate measuring (too much/little flour)	COARSE Insufficient kneading Over-risen	OFF FLAVOR Old yeast Dough over-risen

APPEARANCE	TEXTURE	FLAVOR
Yeast Breads (cont.)		
Over-risen before baking	Oven too cool	
Oven too hot	Too much flour	
No salt	TOUGH	Too warm a temperature during rising
SPLIT CRUST	Too much flour	Too slow oven
Oven too hot at beginning	Poor kneading methods	Underbaked
Loaf too large for pan	HEAVY, COMPACT	Milk not scalded sufficiently
TOP CRUST WRINKLED	Insufficient rising before baking	Bread wrapped when still warm
Cooled too quickly or in a draft	Poor yeast	
Rising period too short	Yeast killed	
	Wrong flour	
STREAKED CRUST	DOUGHY	
Excess flour in kneading and shaping	Underbaked; allowed to "steam" in pans; should be removed from pan when taken from oven	
Dough dried on top while rising		
Excess greasing while rising	LOW VOLUME	
	Temperature too low when dough is rising	
	Yeast killed	
	Not kneaded well to distribute yeast and develop gluten	
	LARGE AIR CELLS	
	Lack of salt to control yeast growth	
	Lack of adequate kneading	
	Allowed to rise too long	
Pies		
SHRINKING	GREASY	OFF FLAVOR
Too much handling	Too much shortening	Rancid fat
Stretching pastry as put into pan	HARD	STALE FLAVOR
Storing dough in refrigerator too long	Inaccurate measuring	Poor quality ingredients
Too much water added to dough	Too much water	RAW FLAVOR
COMPACT, DOUGHY	SMOOTH	Underbaked
Underbaked	Overkneaded	Inaccurate measurements
Too much liquid	Overmixed	
	TOUGH	
	Overhandled or rerolled	
	Too little fat	
	Too much water	
	Too much flour used to roll dough	
	CRUMBLY, TOO TENDER	
	Inaccurate measuring	
	Too much shortening	
	Used oil instead of shortening	
	Shortening cut in too fine	
Shortened Cakes		
UNEVEN	COARSE GRAIN	
Oven rack not level; batter spread unevenly; pan warped	Inaccurate measuring (too much leavening or sugar)	
	Undermixing	
	Insufficient creaming of fat and sugar	

APPEARANCE**TEXTURE****FLAVOR****Shortened Cakes (cont.)**

PEAKED OR CRACKED TOP

Inaccurate measuring; too much flour

Too little liquid

Batter overmixed

Oven too hot at beginning

HEAVY

Overmixed

Underbaked

CAKE FELL

Inaccurate measuring (too little flour; too much liquid, fat, sugar or leavening)

Underbaked

UNEVEN BROWNING

Ingredients not well blended; poor heat circulation

INTERIOR COLOR UNEVEN

Ingredients not well blended

TUNNELS

Overmixing

Inaccurate measuring

Too much flour

TOUGH

Inaccurate measuring (too much egg; too little sugar or fat)

Overmixing

HEAVY AND COMPACT

Inaccurate measuring (too much fat or sugar)

Underbaked

Overmixed

Oven temperature too high

CRUST STICKY

Too much sugar

Angel and Sponge Cakes

LOW VOLUME

Baked at too low temperature

Too short cooking time

Too little cream of tartar

Egg whites not beaten to stiff peaks

COARSE

Oven too hot

Batter overmixed

Cookies

NOT UNIFORM SIZE

Inaccurate measurements; poor portioning; uneven shaping

UNEVEN BROWNING

Baking pan is dark

Poor heat circulation

FLOUR STREAKED

Undermixed

Too much flour

DEEP CRACKS

Overmixing

Overbaking

Too much flour

TOUGH

Overmixing

Too much flour

Too little fat

DOUGHY

Underbaked

Too thick

DRY, HARD

Too much flour

Too little liquid

Overbaking

CRUMBLY

Too much fat

Too much sugar

SUGAR CRYSTALS ON TOP

Too much sugar for quantity of flour

OFF FLAVOR

Inaccurate measuring of salt

Rancid fat



More boys and girls belong to 4-H than any other youth group.



4-H 

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