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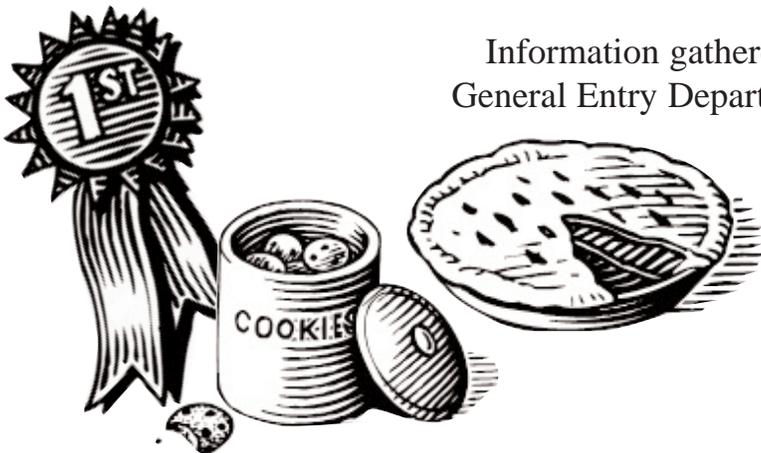
Colorado
State Fair



FOOD JUDGING GUIDELINES

BAKED GOODS, CANDY & HONEY

Information gathered and compiled by the Colorado State Fair
General Entry Department & Colorado State University Extension.



Colorado
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University

Extension



INTRODUCTION

Judging foods at a county or a state fair is a challenge!!

The information in this Food Judges' Guideline has been compiled from many Judges' guidebooks found online.

We took the best information from each source to share with you.

We hope that this Food Judges' Guideline contains information that will assist you, the judge, in evaluating food entries.

We hope that it also will provide guidance to the many food exhibitors who enter their food entries into county and state fairs.

Information obtained from the following sources:

National Center for Home Food Preservation University of Georgia Cooperative Extension Service College of Family and Consumer Sciences in cooperation with the College of Agricultural and Environmental Sciences

North Dakota State University

Cooperative Extension Service University of Kentucky College of Agriculture

Tasty Tidbits Montana 4-H Guide for Judges

University of Nebraska Lincoln Extension

Oklahoma Cooperative Extension Service

Cooperative Extension Washington State University

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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Judging food entries at a county or a state fair can be a challenge!!

TYPES OF JUDGING

There are two types of judging commonly used in county and state fairs— open judging and closed judging.

Open judging is an open assessment by the judge before a group about the entries in the classes. The exhibitors may be present. All exhibitors benefit from the discussion in open judging, although extra care must be taken so that the judge's comments do not embarrass exhibitors or cause unnecessarily hurt feelings.

Closed judging is done in a private area, where only the officials are allowed until the judging is completed. This is usually done when there are a large number of entries and/or when there is not enough room for spectators to listen to open judging. The judging is conducted prior to the opening of the event.

In some judging situations, score sheets are provided for judges to record comments for the exhibitor about the qualities desired and standards used for judging. See examples in Appendix A at end of guideline.

SYSTEMS OF JUDGING

American system - Look at all entries in a particular class and select only one first place, second place, third place, etc. If there are no high quality entries, the judge has the responsibility to place the top exhibit in the appropriate position, even if it is the second or third place.

Danish system - Divide all entries in a particular class into blue, red, and white ribbon groups according to quality. Quality may vary from fair to fair, and every effort should be made to encourage exhibitors. Because only the top from each county may be sent to State Fair, a higher over-all quality might be anticipated than at most county fairs.

REQUIREMENTS FOR JUDGING FOOD ENTRIES

Judging food entries requires a knowledge and understanding of basic food science principles, good nutrition, sensory qualities of an optimum food entry and the factors that contribute to the success or failure of the food entry.

Judging food entries requires basic rules and standards. Applying uniform standards is the only way to defend a judge's placing decisions, giving reasons for placements and avoiding pitfalls of personal bias.

Judging food entries requires practice on the part of the judge. It is essential that a judge be well informed about the food entries they are judging and that they know the standards required.

JUDGING IS

Judging is a term that implies a qualified person making decisions based on standards of food quality.

Judging is a matter of selection.

Judging is a recognition of quality work on the part of the exhibitor who enters. Each exhibitor thinks his or her food entry is worthy of a prize.

Judging produces a ranking of a food entry against food standards. This ranking affects the exhibitor who has created the food entry. There is a lot of emotion and feeling of self-esteem or worth wrapped up in a food entry.

Judging recognizes outstanding features of a food entry. Judging of a finished food entry is a learning experience. It can help to develop understanding and encourage the exhibitor to do better the next time. It is important that the exhibitor knows the probable cause of a less desirable food entry. When the reasons are known, corrections can be made.

HOW TO JUDGE

In judging evaluate the entry as you see it. Begin and end with a positive approach. Emphasize the strong points; make suggestions for improving the weak points. Evaluate each entry on its own merit.

It is important as a judge to familiarize yourself with the desired characteristics of the food entry to be judged. You should score according to the quality description of the food rather than compare one entry with another.

When you evaluate most food entries use your senses.

LOOK.....TOUCH.....SMELL.....TASTE

- **LOOK** at the outside appearance of products – color, shape, and size. Lift product for lightness and texture.
- **TOUCH** the crust and check for a velvety, moist surface. Cut it with a sharp, smooth-edged knife to observe grain. Cut a one-inch slice of cake from near center. Cut biscuits laterally. Muffins are cut from top to bottom. Break off a piece to observe texture. Look at it carefully for a fine grain. Touch it for softness and lightness.
- **SMELL** it for a pleasant, characteristic odor.
- **TASTE** a few crumbs for flavor and check the mouth feel.

AS A JUDGE...

It is important to familiarize yourself with the desired characteristics of the food to be judged.

As a judge you need to be informed. You need to know basic recipes and the various methods used to produce a quality food entry. For example, a cake may have been made from a standard recipe, or used a healthier adaption of the recipe. It could have been mixed by any one of several methods. The recipe and the method of mixing can make a difference in the outcome of the food entry. A well-designed recipe yields a good food entry if the method is correctly followed.

As a judge you need to be objective. Fair judging rules out personal preference. You may be called upon to evaluate a food entry you dislike or a food entry prepared differently from your preferred method.

As a judge you need to be positive. Point out what is good about the food entry you are judging. Suggest what could be done to improve it as a learning experience.

Remember:

- No food entry is so poorly done that it is not worthy of an encouraging comment.
- No food entry is so well done that some improvement may not be made.

As a judge you need to be able to explain. Be sure to provide an explanation as to why an entry was given a certain rating.

JUDGES SHOULD...

- Be attractively dressed and well groomed.
- Have a pleasant manner; smile; be prompt.
- Be flexible; anticipate changes in time needed to do the job right.
- Keep up-to-date with current techniques and trends.
- Understand the abilities and tastes of the age level of exhibitors that are being judged.
- Be tactful and concerned about the exhibitors and their feelings.
- Avoid consulting with spectators.
- Hide personal likes and dislikes.
- Be familiar with the products being judged.
- Take the time to get a general picture of the entries.
- Recognize quality standards.
- Don't give top placing if entries are not worthy.
- Don't rule out unfamiliar ways of doing things if the results obtained are satisfactory. Judge the results that you see, rather than what "might" have been done.
- Make quick and firm decisions.
- Be as consistent as possible.
- Offer reasons for decisions, encourage the exhibitor to continue, to learn and to improve.
- Offer compliments and constructive criticism.

TIPS FOR FOOD JUDGES

1. Determine what equipment and supplies will be on hand when you are judging. The following are helpful, depending on what food items you will be judging. Remember to label your own personal items for easier identification. Some county and state fairs will provide many of the items for you at judging time.

Tableware--knife, fork, spoon

Sharp, long-bladed knife

Long, serrated knife

Paring knife

Cutting Board

Cake breaker

Can opener/lid lifter

Lap towel or apron

Paper goods--plates, towels, cups

Damp sponge

If much judging is done, unsalted crackers, an apple, carrot sticks or a drink of tap water (not ice water) between samples helps clear the mouth of definite flavors. Do not sip coffee, tea or other beverages, as they impart their own flavors and impair judgment.

2. Avoid hand lotions or perfumes.
3. Use all senses - seeing, touching, smelling, hearing, and tasting - in foods judging. Taste is the most subjective sense and it can be a deciding factor when all other factors are equal.
4. Be consistent in the methods you use in judging. This insures fairness to all exhibitors.
5. To check the tenderness and texture of a product: break open muffins, biscuits, rolls, and cookies. Cut loaves of yeast breads and quick breads from one-third to one-half the way in from the end. Cut out a thin slice to view the grain, moisture, blending of ingredients, etc.
6. Cut and remove wedges from cakes. Cut wedges large enough to provide optimum evaluation. Avoid cutting corners of cakes.
7. Open, when necessary, jars of jelly, jam, other preserves and pickles. Cut jelly with a knife to test consistency. Remove a portion of the product and reseal immediately.
8. Do not open canned fruits, vegetables, or meats.

COMMON TERMS USED FOR JUDGING FOOD PRODUCTS

APPEARANCE

Appearance of food determines the acceptance or rejection of the food before it is tasted.

First impressions are important!

The color, the crust or outer covering, the apparent dryness or moistness of the product, the shape or volume, or the size of the piece affects the general appearance of the food. When a garnish is used, it should enhance the appearance of the food.

Words that may help you describe appearance include:

broken	muddy	clear	opaque	crumbly
lustrous	plump	curdled	rough	dull
cloudy	scum	frothy	sediment	shiny

Words that may help you describe condition of top crust include:

dry	level	rounded	ruptured	pebbled
sticky	peaked	pocked	sunken	greasy

TEXTURE

Texture is the way food feels to the touch and the mouth. The fineness or coarseness of the grain or fiber of a food influences the texture.

Grain refers to the cell structure. How big is the cell, how thick are the walls of the cell, how evenly are the cells distributed throughout the mass? Answers to these questions help to describe texture.

Fiber is the thread-like structure in the cells of the food. For example, you can readily see the fibers in such foods as meat, asparagus, and celery.

Words that may help you describe the texture include:

coarse	grainy	mealy	foamy	fine	harsh
rough	flaky	lacy	velvety	brittle	chewy
fibrous	firm	granular	limp	lumpy	mushy
oily	pasty	rubbery	slimy	smooth	soggy
sugary	stringy				

CRUMB

Crumb is the interior portion of product. Crumb is a very small piece of bread, cake, cookie, or other food. By examining the crumb of a food carefully, you can describe the “feel” of a food.

TEMPERATURE

Temperature of a food is in general, at the temperature at which the food is normally served.

CONSISTENCY

Consistency of a food is important to texture and to appearance.

Consistency is the degree of firmness, density, or viscosity (the flow) of the food.

Words that may help you describe the consistency include:

density	viscosity	fluidity	plasticity	brittle
grainy	solid	crisp	gummy	stiff
crystalline	liquid	soft	crumbly	pasty
soggy	curdled	rubbery	tender	firm
runny	hard	frothy	syrupey	mealy
gelatinous	slimy	thin	tough	resistant to movement
full-bodied				

TENDERNESS

Tenderness of food can be measured by the force needed to break, bite, or chew it. Foods that can crumble easily may be too dry or too tender. Tenderness is the ease with which the food can be cut, broken, pulled apart, or chewed.

Words that may help you describe tenderness include:

tender	tough	chewy	elastic	rubbery
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FLAVOR

Flavor of a food is a combination of its taste and aroma. Flavor is the quality which affects the relish, zest, or savor. Flavor is a combination of the taste, odor, and texture experience.

There are four basic taste sensations: sour or acidic, salty, bitter, or sweet.

Certain odors are associated with certain tastes. For example, the odor of milk may tell us that it is sweet or sour without ever tasting it. Another flavor classification might be spicy, flowery, fruity, resinous, foul or burnt.

Words that may help you describe flavor include:

astringent	flat	stale	bland	mellow
starch	blended	pungent	stimulating	brisk
raw	strong	burned	rich	tasteless
delicate	scorched	bitter	floury	soapy
salty	nut-like	eggy	rancid	sour
yeasty	buttery	unbalanced		

ODOR

Odor is a volatile substances affecting the sense of smell.

Words that may help you describe odor include:

acid	fragrant	strong	burnt	delicate
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COLOR

Color is appropriate for the food, pleasing to the eye.

Words that may help you describe color include:

bright	creamy	discolored	dull	faded
gray	greenish	golden brown	brown	normal
spotted	off-color	shriveled	shrunk	smooth
sparkling	stringy	translucent	greasy	acid
weak	pale	rich	snowy white	yellow
lustrous	speckled	reddish brown	gray	mottled
deep chocolate	black	burned	light brown	dark brown

GRAIN

Grain is the structural quality of the food, such as crystals in candies and ice creams, size of pores in cake and bread, and thickness of cell walls in breads or cakes.

Words that may help you describe grain include:

even	thin cell walls	uniform	coarse	grainy	porous
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MOISTNESS

Moistness is the degree of moisture within the crumb.

Words that may help you describe moistness include:

fine	granular	coarse	foamy
heavy	porous	dry	soggy
gummy	wet	moist	

LIGHTNESS

Lightness is the well leavened, not dense, having low specific gravity. Lightness is the light in weight for size.

Words that may help you describe lightness include:

fluffy	light in weight for size	porous	dry	watery
moist	well aerated	flat	compact	dense
heavy				

SHAPE

Shape is the proportionate dimensions.

Words that may help you describe shape include:

broken irregular	even	oval	flat	round
thin	uneven	symmetrical	asymmetrical	thick

SIZE

Size is the height, diameter or circumference of a food.

Words that may help you describe size include:

irregular small medium large uniform
average excellent good poor

TASTE

Taste is the sensations produced by substances listed.

Words that may help you describe taste include:

bitter salty sour sweet



STANDARDS

When standards are given, they are as neat as possible to the combined beliefs of many trained people. Though they must vary enough to make judging possible, standards need not be so rigid as to give exhibitors the false impression that there is only one correct way to do something.

Though many standards are based on scientific principles, others are merely the result of convention and convenience. Therefore, in order to be fair and consistent, the judge must know the standard for evaluating each entry.

Human judgement is individual and subjective. First impressions may not always be accurate. A lopsided cake may be just as tender as a symmetrical one.

Evaluate all factors carefully – appearance, color, density, tenderness, texture, and flavor – before making a final judgment.

The judge must be careful to not let personal likes and dislikes influence or bias their evaluation.

COOKIES

Cookies come in many shapes and sizes. There are six main types of cookies: rolled, dropped, refrigerator, pressed, bar, and no-bake cookies.

Rolled cookies are made from a stiff dough that is rolled on a lightly floured board to the desired thickness and cut out into shapes.

Dropped cookies are made from a soft dough that is dropped onto a cookie sheet. They may or may not be flattened.

Refrigerator cookies are made from a dough high in fat that is chilled. Cookies are then shaped into balls or sliced into a roll before baking.

Pressed cookies are made from a rich, stiff dough that is pushed through a cookie press.

Bar cookies may be more like a cake or may be chewy and are made from a stiff batter that is baked in a shallow pan and cut into squares or bars when cool.

No-bake cookies are made from ready-to-eat cereals, chow mein noodles, oatmeal, nuts, raisins, or coconut and held together with a cooked syrup. Their quality can become affected by heat and may melt or become sticky or oily, depending on the weather.

WHAT TO LOOK FOR	WHAT HAPPENED	BECAUSE OF
SHAPE		
Uniform	Run together	Batter spaced too closely together on baking sheet before baking.
	Irregular shape, peaks, or cracks	Drop Cookies: Improper dropping of dough Dough too thick or too thin Rolled or Refrigerator Cookies: Dough not chilled Thin sharp knife not used for slicing Cutter not used for slicing
VOLUME		
Medium, about 2 ½ - 3" in diameter	Flat	Expired baking powder
	Uneven in size	Varying amounts of dough used
	Excessive spreading	Dough too warm Cookie sheets not cooled between use Incorrect oven temperature Liquid not measured accurately Flour not measured accurately Incorrect form of fat used, such as melted, whipped, or oil form
CRUST		
Dry in appearance	Shiny or sticky	Too much sugar Didn't bake long enough

COLOR

Evenly browned	Too dark	Baked too long or oven too hot Baking sheet or pan with dark, non-stick coating or glass pan was used without lowering oven temp 25°
	Pale on top, burned on bottom	Oven rack not in middle of oven For Bar Cookies – the pan may be too deep for the amount of batter in it. The pan should not be more than 2/3' rds full
	Dark crusty edges Loose flour on top	Overbaking Poor mixing techniques

TEXTURE

Rolled or refrigerator

Crisp and tender	Soft	Cut too thick
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Drop

Moist, soft, and tender	Tough	Too much flour Dough overhandled
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Bar

Moist and tender	Sticky	Too much sugar
	Dry	Too much shortening, fat, or flour
	Crumbly	Too much flour
	Hard	Oven too hot or baked too long Flour too high in protein

FLAVOR

Delicate, sweet Well blended Characteristic of ingredients	Rancid	Rancid fat or stale ingredients
	Bitter	Too much baking soda or baking powder or other leavening agent Too much or too little flavoring
	Doughy, raw flavor	Underbaked Dough too stiff



CAKES

Cakes can be divided into two categories: **shortened** and **unshortened**.

Shortened cakes, also called butter cakes, are leavened by baking powder and/or soda and acid, in combination with steam and air. They may contain a large amount of solid or liquid shortening and are baked in almost any size or shape. Liquids, flavorings, spices, and other ingredients help produce a wide variety of cakes. These are heavier cakes than unshortened cakes, yet have a moist tender crumb and a fine, even grain.

Unshortened cakes are also known as foam, chiffon, sponge, or angel food cakes. They contain little or no added fat. They usually contain a large proportion of eggs or egg whites and are leavened by steam and air and are baked in ungreased tube pans.

WHAT TO LOOK FOR	WHAT HAPPENED	BECAUSE OF
SHAPE		
Level, slightly rounded top Symmetrical	Higher on one side	Uneven heat Oven rack not level Paper liner wrinkled Batter not evenly distributed in pan Batter not cut through with knife to release air pockets
Free from cracks or peaks	Runs over top of pan	Too much batter for pan Oven not hot enough Too much leavening
	Humps or cracks on top	Oven too hot at first Pan too high in oven Too much flour
	Flat (cake doesn't rise)	Not enough leavening, or not fresh Pan too large Oven too hot Too much liquid or fat
VOLUME		
Light in weight for size	Undersize	Not enough leavening Too much liquid or fat Wrong oven temperature Improper mixing
	Falls	Too much shortening, sugar, or baking powder "Peeking" at the item while baking Oven temp too low Too much batter in pan Under baking Cake was moved while baking

Low volume	Not enough leavening Too much batter in pan Incorrect oven temperature or time Too much liquid or shortening Over mixed Pan greased too heavily Incorrect cooling
Peaked top	Batter too stiff Too much flour Too hot an oven at the beginning of the baking period

COLOR

Uniform	Uneven browning	Uneven oven heat Insufficient leavening Under mixed
Light brown	Dark spots or streaks	Too much leavening Insufficient creaming, mixing, or sifting
	Too light or too dark	Incorrect oven temperature and/or baking time Incorrect placement of pan in oven Pan too large (too light) Too much sugar (too dark)

CRUST

Smooth and uniform	Hard	Wrong oven temperature or baking time
	Sticky or shiny	Not baked long enough
	Tough	Too much sugar Not enough shortening or sugar Too much flour
	Sticks to pan	Over mixing Left in pan too long Didn't grease pan enough
	Moist	Insufficient or improper cooling Wrong oven temp or baking time Humid storage conditions
	Cracked	Too hot an oven at the beginning of the baking period Batter too stiff Pan too narrow or too deep

TEXTURE

Tender, moist crumb Light and fluffy	Tough cake	Not enough shortening, sugar, or baking powder
Feels velvety to tongue Fine, round evenly distributed cells	Too light, crumbly, or dry	Over baked Under mixed Not enough fat, sugar, or liquid Too much leavening Oven too hot Too much flour Overbeating egg whites Substitution of cocoa for chocolate without increasing fat
	Soggy gelatinous layer or heavy streak	Shortening too soft Under mixed Under baked Too much liquid Damp flour Wrapped before cooled Too much liquid with a high water content (i.e. fruit, pumpkin, or applesauce)
	Heavy, compact	Overbeating or under creaming Incorrect oven temperature Pan too small Poor quality shortening
	Coarse grain	Insufficient creaming Use of bread flour Too much liquid, sugar, or shortening Oven too slow Oil used instead of shortening
	Falls apart when removed from pan	Too much fat, sugar, or leavening Insufficient baking Cake removed too soon from pan
	Tunnels	Too many eggs or too little sugar Poorly mixed Butter overbeaten Failure to expel air when placed in pan (not cut with knife)
	Sticky and shrunken crust	Too much sugar Damp flour Insufficiently baked Incorrectly frozen and thawed

FLAVOR

Delicate, sweet

Well blended

Characteristic of ingredients

Bitter

Too much baking soda or baking powder or other leavening agent

Too much or too little flavoring

Rancid or stale

Rancid fat or stale ingredients (old or rancid nuts, strong or rancid vegetable oil, poor quality eggs)

Uneven flavor

Under mixed

Strong

Too much of an ingredient



QUICK BREAD LOAVES and COFFEE CAKES

QUICK BREAD LOAVES

These are commonly made of fruit and/or nut mixtures. They are fast and easy to make. The ingredients, method of mixing, and baking technique are similar to making muffins. Some are also made more like a cake. Recipes typically will have interesting variations with the addition of nuts, fruits, cereals, and other types of flour. Quick breads are not always in loaf pans! For example, corn bread is baked in a shallow pan and spoon breads are made in casserole dishes or layer cake pans. Some may be baked in covered cans or special molds.

Why do many quick breads get a crack in the top? Some recipes may have a crack while others do not. Baked products should not be scored down because of a crack. However, some people do prefer an uncracked crust. The crack develops because there is a large mass of batter in the loaf pan that heats slowly. Smoother crusts develop when there is a longer time for the leavening agent to react. This results in an increase in volume before the crust sets, resulting in a smooth crust. If the baking is rapid, a crust with a cracked top and a more solid crumb will develop.

Using long, narrow pans will also result in a crease or crack on top. Consistency of the batter will influence the depth of the crack. Batter touches the edge of the pan first. As the batter warms to baking temperature, it thins and allows a film of fat and sugar to run towards the center of the crust. This shiny line or sticky crack then forms down the center of the loaf. A crack may also form when the underlayer or unbaked batter “erupts” when the leavening agent reacts.

Ways to prevent a cracked crust include:

1. Preheating the oven to 350° and bake the bread as soon as it is mixed.
2. Preheat the oven to 375 - 400°. Cover quick bread and allow it to stand at room temperature 20 – 30 minutes before baking.
3. Tent a piece of heavy foil over the top of the loaf pan filled with batter. Allow the foil to remain until the batter rises and begins to brown. Remove the foil without touching the soft crust. This keeps the top moist and prevents a crack from forming.

COFFEE CAKES

This is a sweet, leavened quick bread like cake often made with or topped with nuts, raisins, fruits, cinnamon, and glazed with melted sugar, frosting, or streusel. Coffee cakes may also be classified as coffee breads, coffee rolls/buns, and Danish pastry coffee cakes.

There are two ways to categorize coffee cakes according to the leavening agent. Coffee cakes may be leavened with baking powder or yeast. The cakes made with baking powder involve a creaming process or muffin/quick bread method (stirring ingredients together separately and then combining quickly etc.) The yeast raised cakes are prepared with a fermentation process and involve several mixing methods, depending on the recipe. Some recipes for yeast based coffee cakes are the same sweet bread recipe used for rolls.

Some coffee cakes have a layer of filling that may contain fruit, jam or preserves, nuts, spices, or chocolate. Other cakes just have these ingredients mixed right into the batter. If a coffee cake's batter contains sour cream instead of milk, the cake will have a richer texture and taste. Coffee cakes commonly have a streusel crumbly topping made of butter, sugar, flour, and spices. Sometimes nuts and oats are also added. The streusel is sprinkled on the top of cakes, muffins, sweet breads, or crisps before baking. When baked the streusel mixture becomes nice and crisp and adds both taste and texture to the baked good.

Coffee cakes may be baked in any size or shape of pan. Many are in Bundt, tube, fluted or loaf pans which can produce several slices of cake. Others may be baked in oblong, square, round, or loaf pans or muffin tins.

WHAT TO LOOK FOR	WHAT HAPPENED	BECAUSE OF
SHAPE		
Slightly rounded top	Peaked	Batter too stiff Batter mixed too much Pan too small
	Cracked	Oven too hot
	Too smooth crust	Batter over mixed
	Low volume	Pan too large Not baked immediately after mixed
	Center crack wet	Not baked long enough Oven too hot
	Dipped center (fallen)	Oven not hot enough Not baked long enough
COLOR		
Evenly colored, medium to dark brown	Pale	Not enough fat or sugar Wrong proportion of ingredients Bananas not ripe enough
	Dark	Oven too hot
	Uneven coloring	Pan not in middle of oven Too many pans in the oven Uneven heat in the oven
TEXTURE		
Tender, moist crumb	Tough	Too little fat Too much mixing Too stiff batter
		Round, even cells
Center crack dry	Soggy	Baked bread wrapped before completely cooling Not baked long enough Too much fruit
FLAVOR		
Rich, appealing flavor	Off flavor	Stale ingredients Too much leavening
	Flat, bland flavor (for Banana Bread)	Bananas not ripe enough Not enough salt
TOPPING		
Evenly spread	Too thick	Used more than necessary
	Strong flavored	Too much cinnamon

PIES

Only non-perishable pies are allowed to be judged or exhibited. This includes fruit or pecan pies. Custard or meringue pies are not accepted. Fruit filling pies usually consist of fruit, fruit juice, sugar, and a thickener such as cornstarch and/or tapioca. When baked, a typical homemade double-crust pie should have a blistered, pebbled surface that promises flakiness. It should be baked to a golden brown perfection, with a slightly, darker brown around its edges. It should be rolled fairly thin (1/8-inch) so that the entire crust will be crisp and fragile and easily cut with a fork, flaky and tender but at the same time not too crumbly.

WHAT TO LOOK FOR	WHAT HAPPENED	BECAUSE OF
CRUST		
(Outside Characteristics)		
Evenly browned appearance, light and flaky texture	Too light OR too dark	Incorrect oven temperature Incorrect baking time Rolled out too thick or too thin
	Shrinks in pan	Dough handled too much Dough stretched too tight in pan Dough stored too long in refrigerator Not pricked enough Used non stick pie pan and did not secure sides
FILLING		
(Outside Characteristics)		
Bubbling through top of crust	Does not fill crust	Not enough filling used Shrinkage of raw fruit not considered
	Filling spills out on crust	Oven temperature too low Insufficient sugar and/or fruit Insufficient thickening Too much sugar Upper crust shrinkage – not sealed properly
CRUST		
(Inside Characteristics)		
Flaky and tender, evenly baked	Tough	Dough too warm when rolled out Too much water Over mixed Too much handling Too much flour used when rolling Not enough fat
	Crumbly	Improper cutting of fat Not enough water Too much fat Self rising flour was used
	Soggy	Under mixed Used a shiny pie pan Baked pie on pan or cookie sheet

FILLING

(Inside Characteristics)

Tender pieces of fruit, adequately baked and of equal size and shape	Undercooked	Under baked Oven temp set too low
	Dry	Not enough liquid
	Layer of thickening	Too much thickening Under baked
	Gummy	Too much thickening

FLAVOR

Fresh flavor, with no off flavor from fat in crust, and a good proportion of ingredients – not too sweet or spicy	Poor flavor	Ingredients not fresh – rancid oil, old nuts, poor quality
	Strong flavor	Too much cinnamon or spice
	Too sweet	Too little fruit and fruit juices in proportion to sugar
	Doughy	Dough rolled out too thick Incorrect proportion of ingredients
	Excess of any flavor	Under mixed
	Raw, starchy flavor	Undercooked filling (thickening agent)



YEAST BREADS

There is little difference in the variety of ingredients used in yeast breads. The physical characteristics of these products are very similar. Yeast breads contain little fat or eggs, compared to a sweet dough recipe. Sweet rolls and coffee cakes are made from a rich, soft dough that contains more eggs, fat, and sugar than the dough used for loaves of bread.

The process of making specialty yeast products and a loaf of bread are similar. Adequate development of gluten either by kneading or beating is important for a successful product.

When a no-knead or batter bread is made, the thin batter is mixed quickly and thoroughly without kneading. The batter is left in the mixing bowl for rising or placed directly in the baking pans. Batter breads have a more open grain, lacy appearance, and an uneven surface.

The perfect yeast bread is varied. It can be coarse, heavy, crusty, chewy and flavorful, while others are light, tender and delicate in taste. Flavors in yeast breads can range from sweet to savory to mildly sour. Bread dough can be baked in loaf pans, as free-form loaves on cookie sheets or as individual-sized buns, twists, or rolls.

WHAT TO LOOK FOR	WHAT HAPPENED	BECAUSE OF
SHAPE		
Well proportioned	Odd shape	Improper molding Raised too long or too short Pan too large or too short
Evenly rounded	Cracks and bulges	Rapid cooling in draft Dough too stiff Incorrect oven temperature
Slight break and shred on edge of pan	Higher on one side	Pans too close together Uneven heat
VOLUME		
Light for size	Heavy, coarse grain	Poor yeast or yeast killed Ingredients not well mixed Low grade or not enough flour Dough too stiff Not raised enough Too large much low-gluten flours Salt omitted Rising time too long Under kneaded Oven too cool
	Too large	Raised too long Too slow oven
	Too small	Liquid in recipe too cool Too much salt Dough too stiff Not enough yeast Rising time too short Oven temperature too hot
	Falls in oven	Rising time too long Collapsed, because over-proofing weakened the gluten

FLAVOR

Blended flavor	Flat	Too little salt
	Yeasty	Too warm rising period Poor yeast or flour or too much yeast Too little sugar Baked too slowly or incompletely
	Musty	Moldy flour or ingredients Incomplete baking
	Sour	Not enough salt Rising time too long Too much eggs, milk, or sugar in proportion to yeast
	Rancid	Rancid fat

COLOR

Inside appearance: creamy white with silky sheen (or appropriate coloring for grain used)	Dark	Too cool oven Improper rising Stale yeast
	Dark streaks	Dough not covered when rising – surface of dough became dry before shaping Oven temperature too cool Bowl greased too heavily Rising time too long Improper or poorly mixing Too much flour or yeast added
	Poor color	Dough not covered during rising Rising time too long Too much flour during kneading and shaping Uneven mixing or baking

CRUST

Outside appearance: crisp and tender,
even golden brown

Tough and hard

Baked too slow
Drying of top
Uneven heat or over baked
Dough not kneaded enough
Too much flour during mixing and kneading

Pale

Too slow oven
Too much salt
Too little sugar
Dough became dry during rising
Rising time too short
Under baked

Too brown on top

Oven too hot or baked too long
Incorrect location in oven
Rising time too short

Not brown on sides

Pans too shiny – heat reflected away from sides
Poor pan placement – overcrowding
Uneven heat in oven

Uneven, bulgy

Uneven shaping
Pan not in middle of oven
Insufficiently proofed

Raw, starchy flavor

Undercooked filling (thickening agent)



YEAST ROLLS

WHAT TO LOOK FOR	WHAT HAPPENED	BECAUSE OF
SHAPE		
Uniform size Attractive shape	Uneven shape	Improper shaping Uneven time in oven Rising time too long or too short
VOLUME		
Light in size	Heavy	Low grade flour Poor yeast Under kneaded Too cool while rising
	Poor volume	Under proofed
FLAVOR		
Blended flavor Slightly sweet and nutty Richer than bread	Flat	Too little salt
	Yeasty	Raised too long Too warm while rising Poor yeast or flour
	Sour	Raised too long Too slow baking Too warm while baking
COLOR		
Uniform Golden brown	Streaks	Poor mixing
	Drying of dough at top	Adding flour at last stage
	Dark crumb	Too cool oven Stale yeast
	Pale	Too slow oven Too little sugar Too much salt
CRUST		
Tender, crisp Smooth crust	Tough	Under proofed – not raised enough Low grade flour Too much salt
	Cracks and bulges	Over handling of dough Not raised properly in oven Cooled to quickly

WHAT TO LOOK FOR
TEXTURE

WHAT HAPPENED

BECAUSE OF

Tender, elastic crumb

Thick

Too slow baking

Slightly moist

Crumbly

Soft wheat flour
Too little kneading

Fine cells, soft and velvety

Compact at bottom

Not raised enough
Under baked

Sticky

Steamed by cooling in pan

Coarse

Poor yeast
Low grade flour
Raised too much



PASTRIES

The key to successful pastries lies in how the dough was mixed and rolled. Ingredients must be handled delicately, and not mixed too much or too little if a high quality product is desired. Pastries have rough blistered surfaces with no large air bubbles. They are golden brown in color, with the centers just a little lighter. They are not shrunken and have attractive, sharp shapes with uniform thickness. Pastries are known by their delicate layers, especially evident when the pastry is broken. They are crisp and flaky and cut easily with a fork but hold their shape when lifted without falling apart. Examples include tarts, streudels, phyllo doughs, croissants, and Danishes.

WHAT TO LOOK FOR	WHAT HAPPENED	BECAUSE OF
SHAPE		
Uniform size Attractive shape	Uneven shape	Improper shaping Uneven time in oven Rising time too long or too short
VOLUME		
Light in size	Heavy	Low grade flour or poor yeast Under kneaded Too cool while rising
	Poor volume	Under proofed
FLAVOR		
Blended flavor Slightly sweet and nutty Richer than bread	Flat	Too little salt
	Yeasty	Raised too long and too warm while rising Poor yeast or flour
	Sour	Raised too long Too slow baking or too warm while baking
COLOR		
Uniform Golden brown	Streaks Drying of dough at top Dark crumb	Poor mixing Adding flour at last stage Too cool oven Stale yeast
	Pale	Too little sugar or too much salt
TEXTURE		
Tender, elastic crumb	Crumbly	Soft wheat flour Too little kneading
Slightly moist Fine cells, soft and velvety	Compact at bottom	Not raised enough or under baked
	Sticky	Steamed by cooling in pan

CRUST

Tender, crisp
Smooth crust

Tough

Too slow oven
Under proofed – not raised enough
Low grade flour
Too much salt

Cracks and bulges

Over handling of dough
Not raised properly in oven
Cooled too quickly

Thick

Too slow baking

Coarse

Poor yeast or low grade
Raised too much



CROISSANTS AND DANISHES

Croissant, Danish and puff pastry are all made from laminated (layered) dough. That is encasing butter in dough, and taking it through a series of folds, rolling and turns to produce layers of butter in between sheets of dough. The leavening in laminated dough is derived mainly from the steam generated by the moisture in the butter during baking. The laminated fat acts as a barrier to trap the water vapor and carbon dioxide formed during baking. As the steam expands in the oven it lifts and separates the individual layers. Danishes can also be made with a yeast type dough, with a more bread-like texture.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Butter/margarine breaks through the dough	Butter/margarine too cold Dough too soft Harsh sheeting reduction	Condition butter to 57-60 °F Reduce water in the dough Gradually reduce sheeting
Butter/margarine oozes out from the dough	Butter/margarine too warm Dough too warm Dough too tight	Condition butter to 57-60 °F Chill dough Increase water in the dough
Butter melts	Insufficiently laminated Room too warm	Work in a cooler room, or cooler time of day Apply more folds, minimum of 3 half folds
Pastry sticks	Insufficient dusting Room temperature too warm	Use more dusting flour Work in a cooler room, or at a cooler time of day Reduce dough temperature
Flattened, wrinkled after baking	Baking sheet or pan knocked in the oven, or before entering the oven Baked in too hot an oven for too short a time	Shorten rising time Be careful when placing in the oven Adjust baking temperature
Small in volume, heavy and dense in texture	Under proofed (rise) Lack of humidity Oven too cold	Proof longer Increase humidity in proofer Increase oven temperature
Loss of sweetness, open texture and lack of crust color	Proofed too long Excessive retarding time	Reduce proofing time Reduce retarding time
Loss of flakiness and a bread like texture	Room too hot, causing butter to melt Oven too cool Over proofed	Work in a cooler room, or at a cooler time of day Increase oven temp Reduce proof time
Pale, moist and heavy after baking Tough baked product	Under baked in oven Baking temperature too low Too little layering butter Too little dough butter	Increase baking temperature Increase roll-in butter Increase dough butter Increase baking temperature
Blisters on baked product and product flow excessive	Excessive humidity	Reduce humidity or bake on a cool, dry day

PUFF PASTRIES

Making puff pastry works best in cool, dry kitchen because if the fat becomes too warm, it melts and breaks through the dough layers. Puff pastry relies solely on steam and requires a higher percentage of butter and a more elaborate folding process than yeast pastries. The thin, crisp, flaky layers are formed when the dough and butter are rolled together, then folded in thirds like a letter and rolled again in a process called a turn; classic puff pastry is "turned" six times, which creates over 1,000 layers of dough. Well-made puff pastry rises to 5 times its original volume during baking. As it bakes, the water in the dough converts to steam, filling the places previously occupied by the butter, which has already melted and been absorbed by the dough. Preparing the dough may be made from scratch or pre-made. Quick puff pastry is made by tossing large cubes of butter with flour before the water is added to form the dough. The dough is then rolled and folded like puff pastry. Although it does not rise so high as classic puff dough, the quick pastry has the same delicate, flaky texture and can be used for any desserts where the pastry doesn't have to rise as tall.

What to Look For	What Happened	Because Of
SHAPE		
Uniform size	Irregular shape	Improper rolling
Attractive shape		
Holds shape when cut	Uneven lift	Faulty spotting of roll-in fat
Distinctive layers.		Dough not relaxed enough Uneven heat in oven
	Shrinkage	Dough not relaxed enough after rolling and makeup
COLOR		
White, with a light golden brown crust	Pale color	Under baked
TEXTURE		
Firm, pliable, reasonably soft	Fat running out	Too much fat used Not enough turns Oven too cool
Crispy and crunchy, but light in texture	Oily looking	Underbaked

PHYLLO DOUGHS

Phyllo dough may be pre-made or from scratch, which is extremely difficult to make. They are packed with fillings made from fruit and or spices. Phyllo dough sheets stretch and stay together because of the gluten formed in the dough from wheat flour and moisture. Because there is oil in the recipe, it's not as effective as a classical shortener, such as butter or shortening, so long strands of gluten are formed in the dough. These strands are then stretched thinner and thinner until the sheets are as thin as tissue paper.

PROBLEMS WORKING WITH PHYLLO DOUGHS

Frozen phyllo dough must be thawed at least 24 hours before using. For best results, the dough should be removed still in its package, from the freezer and place directly in the refrigerator for 24 hours; unopened, or the sheets won't thaw properly. Do not thaw at room temperature because the sheets tend to stick together. If thawed too quickly or if the sheets are cold when unfolded, they will crack. Phyllo sheets are paper-thin and tear easily. Phyllo dough should not be punctured when stretched. If the phyllo dough is not defrosted properly, the pastry sheets can stick together from too much moisture. Pastries can dry out rapidly and crack because it is so thin and has almost no fat. Phyllo dough is always layered with butter or oil brushed in between that result in a puffed-up height and are crisp, light and flavorful.

Fillings must be prepared and completely cooled before beginning to use the phyllo sheets. It should also be chilled and not excessively moist or it can get soggy. A filling that is even slightly warm will wilt the pastry and make breaking and tearing more likely to happen.

MUFFINS

Muffins may be plain, sweet, made with cereal, fruit or nuts and differ in appearance, texture, and flavor. Different muffins have different standards – a bran muffin is of heavier texture than a plain muffin, but will have similar characteristics. Muffins are smaller versions of quick-breads and are easy to make.

There are two types of muffins: bread-like and cake-like, each mixed using a different method and containing different proportions of fat and sugar to flour. Less sugar and fat makes a bread-like muffin with a more coarse interior crumb than a cake-like muffin. The fat used is usually in liquid form, either an oil or melted butter. Stirring must be kept to a minimum so the gluten is not overdeveloped. The interior crumb has small, and more irregular air holes. A higher sugar and butter content makes a cake-like muffin. The butter (room-temperature) and sugar are creamed together and need more stirring to develop the desired structure. The interior crumb should have smaller air holes and tender, more like a cake.

What to Look For	What Happened	Because Of
SHAPE		
Round, pebbled top	Knobs or peaks on top	Too much stirring Too stiff mixture Uneven oven temperature
CRUST		
Tender	Tough	Too much flour Too little fat or sugar Over mixed
Slightly rough, pebbly surface	Shiny surface	Too much mixing Egg and milk insufficiently mixed
	Hard crust	Too long baking Too high temperature Too close to heating element in oven
	Rough surface with sharp edges	Under mixed Too much flour
FLAVOR		
Pleasing	Streaks of ingredients	Under stirring
	Off flavor	Too much baking powder Rancid fat
	Bitter, dry	Under stirred
	Flat	Too little salt

COLOR

Golden brown	Unevenly browned	Too hot oven Pans filled too full Wrong proportions Too much baking soda or sugar
Creamy white inside, or paler in color than crust	Pale	Too much batter in muffin cup Over mixed Too cool oven
	Dark sides	Sides of muffin tin greased
	Too brown Gray interior	Too much sugar Wrong time and temperature
	Yellow spots	Too much leavening Ingredients insufficiently blended

SIZE

Large in proportion to weight	Compact	Wrong time and temperature Improperly mixed Insufficient leavening Too much flour or liquid
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TEXTURE

Moist and tender	Harsh, dry crumb	Over baking Too stiff batter Too much flour
Rather coarse, but free from tunnels	Tunnels	Over stirring – too much air Too much liquid Inaccurately measured Too little fat or sugar
	Heavy and irregular	Insufficient leavening Too much egg
	Tough	Not enough shortening
	Crumbly, dense	Under stirring – not enough air



BISCUITS AND SCONES

There are two types of biscuits – rolled and dropped. Both are leavened by baking powder and contain similar ingredients but differ in proportion of liquid and method of preparation. Rolled biscuits are more identical and dropped biscuits are more irregular in shape. Scones are similar to biscuits. They have a soft and sticky dough that has the ratio of one part liquid to three parts wheat flour. They need to be baked in a moderate to hot oven so the dough sets quickly thereby producing a light scone with a light to golden brown floury top and bottom with white sides. The texture of the interior of the scone should be light and soft, and white in color. Scones have some height from rising in the oven, though not as much as a biscuit, are lightly browned on the outside and cooked all the way through on the inside. When opened, they should be slightly crumbly, tender and almost cake-like or flaky depending on how they are made.

What to Look For	What Happened	Because Of
SHAPE		
Smooth, level top Straight sides	Uneven shape	Improper cutting, or cutter twisted during shaping
	Uneven sides	Dough not uniform in thickness Uneven heat Improper mixing or careless handling
FLAVOR		
Delicate	Bitterness or soapy flavor	Too much baking soda or baking powder
	Bland, off flavor	Ingredients not blended thoroughly Stale ingredients or overworked the dough
COLOR		
Creamy white	Yellow specks	Uneven distribution of soda or baking powder Baking soda not dissolved or neutralized
	Uneven brown	Flour on surface
Uniform, without streaks	Pale crust	Too slow oven Too stiff dough or excess flour used
	Dark bottom crust	Baked on darkened pan
VOLUME		
About twice unbaked size expired or not fresh	Flat and heavy	Incorrect proportions - too much shortening or not enough leavening
		Under baked Too much flour or liquid Improperly mixed
	Coarse, uneven	Improper mixing Too much leavening Ingredient inaccurately measured
	Low volume	Improper manipulation Not enough leavening Ingredients inaccurately measured Wrong time and temperature

TEXTURE

Moist and tender	Tough	Lack of fat
Flaky, slightly crumbly, pulls apart in thin layers	Coarse, porous, harsh dry crumbs	Improper mixing and too stiff dough Over baked
Fine, even holes		Too much fat or not enough shortening Shortening under or over mixed with flour
	Crumbly, oily	Too much fat

BREAD MACHINE BAKED GOODS

Issues that are of importance when using a bread machine include having ingredients at room temperature, room drafts, and humidity of the room. Bread flour is an important ingredient, as bread machine loaves need the greater protein and gluten strength to produce a loaf with good volume and a fine texture. Extra gluten must be added to recipes using whole wheat flour.

What to Look For	What Happened	Because Of
SHAPE		
Well proportioned Evenly rounded	Falls during baking	Loaf too big for bread machine Humidity too high Proportion of ingredients wrong Temperature of liquids too high
CRUST		
Crisp and tender, evenly raised	Cratered sunken top	Too much yeast or liquid Not enough flour Temperature of liquid too high High humidity or temperature in room Proofing too fast
	Mushroom top – rises then falls during baking time	Too much yeast Too much sugar Needs shorter cycle
	Too thick	Need lighter setting Left in pan too long
	Gnarly appearance	Too little liquid Too much flour
COLOR		
Even golden brown	Pale	Not enough sugar Baking temperature not high enough Crust set at too light of a color

VOLUME

Light for size	Loaf does not rise	Flour too low in protein content Needed extra gluten Too much salt – no more than 1/4 tsp. per cup of flour Not enough sugar or old yeast Heavy or coarse ingredients Liquid too cold Ingredients not measured correctly
	Uneven top	Too much salt, sugar, or yeast
	Rises too high	Recipe too large for bread machine

TEXTURE

Tender, elastic, slightly moist	Too moist	Set in pan too long No cool down cycle
	Dry and stiff	Too little yeast Not enough liquid Not enough flour
	Wet and sticky	Too much liquid Too little liquid
	Crumbly	Too little liquid or fat

MICROWAVED BAKED PRODUCTS

Baked foods cooked in the microwave do not have the same appearance as those cooked in a traditional oven. Texture is finer and volume is greater due to an exaggerated expansion of air cells and a lack of a crust to slow down the rising. Surface areas of microwaved baked products are moist and soft. They are frequently more tender but the flavor should be the same.

Microwave baked products are pale in color. Some newer microwaves have technology that helps prevent this. Baked products are pale because in a conventionally baked product, the prolonged dry heat acts on the surface of the food to decrease moisture, carbonize fats, and caramelize the sugar in the recipe. This leads to a crisp, crusty texture and dark color. Choosing recipes with a topping or a streusel for a microwave product is an easy way to improve the pale appearance of the baked product. It is easy to overcook foods in a microwave, resulting in a hard, dry product. Special attention is needed to baking time.

Baked Item	Characteristic	Problems and Causes
CAKES		
Appearance	Higher and lighter than conventionally baked product Symmetrical Slightly uneven with rounded top Surface is pale, unless ingredients include spices, chocolate, molasses, brown sugar, or other naturally colored ingredients or a topping	Uneven surface – Baked as a sheet cake or pan filled too full. Make sure cake is rotated during baking to assure uniform cooking.
Texture	Light for weight Velvety crumb Even grain Very tender Soft outer surface	Bottom under baked – cooled on a wire rack instead of a flat, solid heat resistant surface where retained heat can complete cooking. Tough - Batter too lean, not enough fat or sugar. Large air pockets - Batter not “cut through” with a knife or tapped to release air and produce an evenly filled pan.

CAKES RECOMMENDATIONS

Recipes	Select rich formulas with whole eggs. Good results are achieved with yellow, spice, or chocolate cakes or those containing oil. Not recommended for angel or sponge cakes.
Size and shape	Layer cakes bake more evenly than sheet cakes. Round and ring pans give a more uniform baked product since there are no corners to overcook and energy can penetrate from all sides.
Pan preparation	Fill pans half full since there is greater batter expansion in microwave baking. Lightly grease pans but do not flour them. Do not use vegetable cooking spray as it tends to form a gummy layer. Line dish with a single layer of wax paper cut to fit the bottom of the pan if cake is to be turned out.
Baking	Microwave one layer at a time. Rotate pan halfway through baking cycle, or more depending on the amount of batter. Microwave slowly so cake rises less rapidly and bake more evenly. When done, the cake will spring back and cake will pull away from the edges of the pan. Any moisture on cake will evaporate on cooling. Cool cakes on a flat, solid heat resistant surface instead of a wire rack to continue the baking process. Do not over bake!

PASTRIES

Appearance	Light creamy color unless flavored or brushed with food coloring or egg yolk. Well shaped, attractive edges They are opaque and dry with a blistered top.	Shrunken – shell not pricked with fork prior to baking. Overstretching when placed in pan.
Textures	Crisp and flaky	Soggy crust – Filling contains too much liquid. Unthickened filling not precooked. Filling seeped through crust prior to thickening because the prick holes were not sealed before the filling was added

PASTRIES RECOMMENDATIONS

Recipe	Pies that have separately cooked crust and filling are best suited for microwaving. Double crusted pies should not be microwaved, bottom crust does not bake properly. Fruit pies can be prepared open face and topped with streusel crumbs or prebaked pastry cut-outs.	
Size and shape	A high fluted pastry edge helps retain bubbly fillings.	
Pan preparation	Pastry should be crisp and flaky before filling is added. Precook fillings that contain a lot of liquid.	
Baking	Place wax paper in the bottom of the oven to help with possible spills. Lift glass plates to check for doneness. Bottom should appear opaque and dry, the top dry and blistered. Fruit pies are done when filling is hot and has started to cook in center. Cooking continues while pie cools.	

COOKIES

Appearance	Bar cookies are even in height and do not have a thin, crisp top crust. Cookies are well shaped and may be larger because of more spreading during baking.	Interior brown spots may develop in small cookies because cooking begins below the surface, and causes some areas to over bake.
Texture	Rich and moist. Refrigerator cookies may not be crisp.	Overcooked - too much fat quickly melts over the batter. This absorbs the microwaves and causes the areas to overcook.

COOKIES RECOMMENDATIONS

Recipe	Moist bar cookies and brownies microwave well because fat and sugar attract microwaves. If there is too much fat in the recipe, they may overbake. Large batches do not do well in the microwave. Drop cookies may be more efficiently baked in a conventional oven. Oatmeal, peanut butter and sugar cookies and cookies that do not brown normally do well in microwaves. Cookies with colorful ingredients or toppings are appealing do well. Stiff cookie dough retains the best shape.	
Size and shape	Bar cookies microwave more evenly. Drop cookies need to be arranged in circle for uniform baking.	
Pan preparation	Grease the bottom of the pan lightly but don't grease the sides when baking bar cookies. If approved by the manufacturer, shield corners of bars with foil triangles to prevent overbaked, dried edges.	

Baking

Elevate baking sheet on inverted saucer to promote more uniform cooking. Dense, heavy foods like brownies or bars may take longer to bake than light, porous cake-like bars. Cool bars on heat proof surface instead of a wire rack to continue the baking process. Brownies and other dense items may require up to 30 minutes of standing time.

QUICK BREADS

Appearance

Even contour and pale in color unless dark ingredients or toppings are used. Higher volume than conventionally baked since there is no crust to inhibit rising. Raisins, fruit and nuts should be evenly distributed.

Overcooked edges are caused by cooking at too high power. Heavy batters need to be microwaved slowly to promote optimum rise and slow cook. Fry lines show when the sides of the pan are greased.

Texture

Fine, even grain with no tunnels and a soft crumb and crust.

Soggy bottoms happen when the bread is under baked, when the pan isn't elevated during baking, or when the product is not given standing time after baking to continue the baking process. Heaviness occurs when there is too much fruit or oil.

QBREADS RECOMMENDATIONS

Recipe

Use recipes with natural color or creative toppings.

Size and shape

Round pans or ring molds work well for quick coffeecakes. Arrange muffins in a circle if specially designed muffin ring is unavailable. Select pans with straight sides for uniform baking.

Pan preparation

Line loaf pans with wax paper to help with removal from pan. Don't grease the sides of the pan. Use double cupcake lines to absorb extra moisture. Fill muffin cups 1/3 full and other pans 1/3 to 1/2 full to allow for great batter expansion. If approved by the manufacturer, shield the edges of the loaf with foil strips to avoid overcooked edges.

Baking

Coffee cakes with heavy toppings or topping in bottom of pan should be set on inverted dish or saucer to ensure thorough baking. Rotate muffins and quick breads midway through baking cycle for faster, more uniform cooking. Remove foil strips during the last few minutes of baking. When done, no unbaked batter should be present at the center of the dish. The top surface may appear moist, but will evaporate upon cooling. Cool muffins on wire rack. Let loaf breads and coffee cakes stand 5 – 10 minutes on heat resistant surfaces before removing from pan and cool on wire rack.

YEAST BREAD PRODUCTS

Appearance	Pale, unless prebaked to desired degree of brownness in conventional oven or topped with colorful ingredients. Dry, gently rounded surface and evenly shaped. Higher volume than conventionally baked bread since there is no firm crust to inhibit rising.	Collapsed, uneven surface occurs when the pan is too small. Large air pockets form, causing bread to fall. Yellow or brown spots occur when microwaves penetrate one area.
Texture	Soft, dry crust, not crisp. Uniform cell structure.	Soggy bottom crusts happen when the bread dish is not elevated during baking. Tough, dry crusts happen when the bread is overbaked or baked at too high a power.

YBREADS RECOMMENDATIONS

Recipe	Moist, rich coffee cakes microwave well because of high sugar and/or fat content. Select recipes with ingredients that contribute color, such as rye or whole wheat flour, molasses, or dark spices. Yeast products can be brushed with milk or melted butter and topped with cheese, poppy seeds, nuts, brown sugar, cinnamon streusel, or cracker crumbs before baking. (Please note, no cheese toppings for baked microwave products entered at county and state fairs, as the cheese is a potentially hazardous food). Glaze or garnish after baking for color; apply toppings generously since surface area expands about three times during rising and baking.
Size and shape	Yeast dough can be shaped into loaves or rolls and baked in microwave safe ring molds, round or Bundt pans, pie plates, or standard loaf pans.
Pan preparation	Grease pans lightly and sprinkle with crushed bread or cracker crumbs, wheat germ, herbs, or seeds. These extra ingredients add color and texture and absorb excess moisture that forms between the bread and dish during baking.
Baking	To prevent condensation and soggy bottom surface, set baking dish on inverted saucer to elevate above the oven floor. Bake one loaf at a time. Rotate pan every 2 – 3 minutes. When done, bread should feel firm and well set, yet spring back when touched.

GLUTEN FREE BAKED PRODUCTS

Baking without gluten (as found primarily in wheat flour) can be challenging because gluten contributes important properties to various types of baked products like cookies, cakes, pastries and breads. Gluten development is not as important for cookies as it is for cakes, so gluten-free flours can be substituted with similar results. Cakes and other types of batter-based products, like pancakes, need gluten for its gas-retaining ability that produces a light and airy interior structure and a tender crumb.

Recipes calling for 2 cups of flour or less are more successful with gluten-free flour products. Those that use cake flour are easier to adapt as well, because that type of flour contains lower amounts of gluten. White rice flour and starches can be stored in the pantry but because of a higher fat and protein content, whole grain flours and meals should be purchased in smaller quantities and stored in refrigerator or freezer to prevent rancidity. Some types of flours are flour blends. Flours with stronger flavors would make up no more than 25 – 30 percent of the total blend and should be balanced with neutral flours and starches. It is not advised to use stronger flavored flours, such as bean flours, in delicate recipes. A higher percentage of these flours may be used in baked goods that include nuts, chocolate, or a high level of spice. Flour blends for quick breads often contain ½ teaspoon xanthum gum per cup of flour while yeast breads require ¾ teaspoon per cup.

Wheat/gluten-free flour dough will be stickier, heavier and softer than regular wheat flour dough because there is little to no elasticity to the dough without the gluten. For these reasons, using a batter beater, not a dough hook, and a heavy-duty stand-up mixer to beat extra air into the dough and help blend it thoroughly.

Gluten-free baking can be unpredictable. Use the following suggestions to help evaluate products made from gluten-free flour.

Baking Tips

TO INCREASE MOISTURE

- Add gelatin, extra egg, or oil to recipe.
- Honey or rice malt syrup can help retain moisture.
- Brown sugar works better than white.
- Dough enhancers improve tenderness and staling resistance.

TO ENHANCE FLAVOR

- Add chocolate chips, nuts, or dried fruits.
- Double the amount of spices.

TO ENHANCE STRUCTURE

- Use a combination of gluten-free flours and mix together thoroughly before adding other ingredients.
- Add dry milk solids or cottage cheese into recipe.
- Use evaporated milk in place of regular milk.
- To reduce grainy texture, mix rice flour or corn meal with liquid, bring to a boil and cool before adding to recipe.
- Add extra egg or egg white if product is too crumbly.
- Do not over beat; kneading time is shorted since there is no gluten to develop.
- When using a bread machine, only use one kneading cycle.

LEAVENING

- Starch flours need more leavening than wheat flours.
- Rule-of-thumb: start with 2 teaspoons baking powder per cup of gluten-free flour and adjust downward as needed for altitude.
- If baking soda and buttermilk are used to leaven, add 1 1/8 teaspoon cream of tartar for each 1/2 teaspoon of baking soda used to neutralize acid.
- For better rise, dissolve leavening in liquid before adding to other ingredients or add a little baking powder.

TEXTURES/LIGHTNESS

Sift flours and starches prior to measuring, then combine and sift again (together) after measuring to improve the texture of the product.

Hold gluten-free dough to at least 1/2 hour (up to overnight) in the refrigerator to soften and improve the final texture of the product.

In products made with rice flour or corn meal, mix with the liquid called for in the recipe, then bring to a boil and cool before adding to recipe can help reduce the grainy texture.

BAKING PANS/UTENSILS

Bake in smaller than usual portions at a lower temperature or a longer time (small loaf pans instead of standard size; use mini-muffins or English muffin tins instead of large muffin tins).

Use dull or dark pans for better browning. Keep a separate sifter to use with gluten-free flour to prevent cross-contact with gluten.

FRESHNESS

Gluten-free baked goods can lose moisture and quality quickly, so wrap them tightly and store in the refrigerator or freezer in an airtight container to prevent dryness and staling.

Refrigerate all flours for freshness and quality but bring to room temperature before measuring.

Candy

- When judging candy look for:**
- | | |
|------------------------------------|-----------------------------------|
| 1. Taste | 2. Texture - Grainy |
| 3. Appearance - Shape/Molded | 4. Color |
| 5. Freshness | 6. White spots (chocolate is old) |
| 7. Water in chocolate | 8. Overcooked chocolate |
| 9. Too perfect - may be commercial | |

- Types of Candies:**
- | | |
|-------------------------------------|----------------------------|
| 1. Chocolate Candy | 2. Hard Candy |
| 3. Chewy Candy | 4. Whipped Candy |
| 5. Grained - Cream Fudge - Caramels | 6. Cotton Candy - Crystals |
| 7. Marzipan - Pasti | 8. Licorice |
| 9. Jelly Beans | |

- Outside Appearance:**
- | | |
|--------------------------|----------------------------|
| 1. Shape - molded | 2. Surface - thick or thin |
| 3. Size - uniform pieces | |

- Inside Appearance:**
- | | |
|------------------------------|---|
| 1. Texture - smooth - creamy | 2. Color - white spots - water - overcooked |
|------------------------------|---|

- Flavor:**
- | | |
|--|------------------------|
| 1. Eating quality | 2. Smell |
| 3. Taste - too waxy | 4. Filling - freshness |
| 5. Is it pleasant and satisfying - sweet to the taste - will have a delicate flavoring | |
-

HONEY

When taking a sample do not mutilate the exhibit. Take a sample from around the edge of the surface and for comb honey take it from one or two cells at the edge. Use a plastic spoon and not a finger to transfer the honey to the mouth.

As honey should be fit for human consumption it should be CLEAN.

The color should be uniform throughout the exhibit. The taste should be “nice and mellow”. The surface should be firm and dry and the texture finely grained.

Comb Honey is honey, intended for consumption, which still contains pieces of the hexagonal-shaped beeswax cells of the honey comb.

Judge:

1. Uniformity of appearance	2. Absence of uncapped cells
3. Uniformity of color	4. Absence of watery cappings
5. Cleanliness and absence of travel stains	6. Freedom from granulation and pollen
7. Uniform weight of each section	8. Total weight of entry

Extracted Honey is honey that has been separated from the comb by centrifugal force, gravity, straining, or by other means.

Judge:

1. Density	2. Absence of crystals
3. Cleanliness (without lint, dirt, wax, or foam)	4. Flavor
5. Container appearance	6. Accuracy of filling (headroom and uniformity)
7. Color and brightness	

Creamed Honey has a mild flavor, spreads like butter at ordinary room temperature and doesn't drip. Creamed honey is really crystallized or granulated honey. Well-made creamed honey possesses a creamy texture because the crystallization process has been precisely controlled.

Judge:

1. Fineness of crystals	2. Uniformity and firmness of product
3. Cleanliness and freedom from foam	4. Flavor
5. Accuracy of filling and uniformity	

Beeswax is a natural wax produced in the bee hive of honey bees. Beeswax is produced by the female worker honeybees.

Judge:

1. Cleanliness	2. Uniformity of appearance
3. Color	4. Aroma
5. Absence of cracks and shrinkage	

Frame of Honey

Judge:

1. Uniformity of appearance	2. Absence of uncapped cells
3. Uniformity of color	4. Absence of watery cappings
5. Cleanliness and absence of travel stains	6. Freedom from granulation and pollen