

Pastry Baking

CALUMET BAKING POWDER CO.



Pastry Baking



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Announcement to Teachers

The following monographs have been prepared for free distribution among teachers and students, by the Home Economics Department, of the Calumet Baking Powder Company, 4100 Fillmore Street, Chicago.

- 1. Modern Cake Baking.
- 2. A Monograph on Muffins.
- 3. Modern Biscuit Baking.
- 4. A Monograph on Deep Fat Frying.
- 5. A Lesson on Griddle Cakes and Waffles.
- 6. A Model Home Kitchen.
- 7. Pastry Baking.

Additional copies of the above may be secured upon request.

ASTRY is a class name for a variety of articles made of light puffy dough, such as pies and tarts. The finest and richest kind is usually termed "Puff Paste." This requires considerable skill as its success largely depends on lightness of hand in preparing. In America, pastry is usually called piecrust. It is a shortened dough made of a combination of flour, salt, baking powder, shortening and a little water, rolled thin and baked. It is usually filled with fruit or other fillings, and used as a dessert. Chief among these desserts are pies. A good pastry is light, tender and flaky should be of a delicate brown color and and crisp when baked. Of course the richer the pastry, the more flaky it is.

Originally pies were not intended for desserts but rather as the main dish of the meal, being filled with meats, fish or vegetables; this form of pie is still popular, although they are not what one usually refers to when the word pastry is used.



Ingredients

The ingredients one uses in making Pastry are few and simple, usually they include flour, salt, baking powder, shortening and liquid. When properly combined, they will be all that is necessary to make a light, flaky and crisp pastry. Baking powder is used to assist the inexperienced in insuring a light and flaky pastry.

It also takes a bit of guess work out of pastry making for even those accustomed to making pastry, cannot always depend on having the best results. Only a small quantity of baking powder is required.

1. Flour

- 4. Shortening
- 2. Baking Powder
- 5. Water

3. Salt

Flour for Pastry

Pastry flour of course is the most desirable for making pastry, as it is made from winter wheat. It contains less gluten and therefore lacks that gummy consistency of bread flour. If pastry flour is not used, substitute for each cup of bread flour, one tablespoon of cornstarch and sift with the flour thoroughly.

For Puff Paste which is made so as to hold air between the layers of pastry, bread flour is more frequently used as it holds the air better.

Pastry may be made of the flour of other grains too. The dough is more difficult to handle, but does produce good pastry. Such flours as corn, rice, barley, etc., require less shortening than when wheat flour alone is used. Dark flours produce a pastry dark in color, but it does not affect the quality.

What is Baking Powder?

Baking powder is a common leavening agent. It is not a food, but is a preparer of food. Baking powder is put in the food, not to be a part of it like flour, but simply as a convenient means of making breads, cakes, muffins, etc. light. It is used only for the gas it produces. The several substances which mixed together make the baking powder—coming in contact with the moisture and oven heat applied—produce a chemical change in the dough or batter, making gas.

This gas forming in small bubbles throughout the dough or batter, lightens or leavens it. The gas is carbon dioxide gas, sometimes called cabonic acid gas. This is the gas which is present in all carbonated waters whether natural or artificial, as in soda fountain waters.

After food is baked the substance left is in no way like the original baking powder put into the mixture—but this substance or residue that remains in the food, is a perfectly harmless substance, pure and wholesome in every respect.

Experience has taught that for the best results, the baking powder that is most desirable is one which contains white of egg, as it holds the gas bubbles in suspension after they have formed in the dough, so there is less danger of the mixture falling.

Baking Powder should always be kept in a cool place, as either heat or moisture will sometimes cause a slight loss of the leavening gas with a great many baking powders.

Shortening for Pastry

Any good pure shortening may be used, lard is considered by many good cooks as the best shortening for pastry, while others prefer a solid vegetable shortening, and again others make all their pastry with vegetable oil. It is merely a matter of choice and the correct manipulation. One point to remember, however, the slightest rancid odor or disagreeable taste will show in the pastry. If a solid fat is used, one that remains solid at ordinary room temperature is best. When using the solid shortening, it should not be broken into such minute particles and the flour must not be saturated with fat. Again the fat should be as cold as possible.

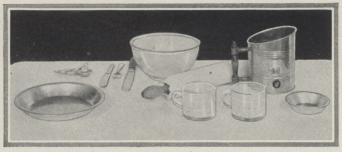
Butter is most often used for puff paste, but a vegetable shortening will make a very acceptable product. Combinations of both animal and vegetable fats are occasionally used for pastry making and do very well. Chicken fat is often used. A mixture of lard and tried out beef suet also makes a good pastry shortening. In fact almost any fat without odor or flavor may be used

as all or a part of the fat required.

To clarify melt the fat in a kettle and add raw potato cut in quarter-inch slices, then allow the fat to heat gradually. When it ceases to bubble and the potatoes are well browned strain through a double cheese cloth placed over a wire strainer. The potato will absorb all odors and also collect some of the sediment. The rest will settle in the bottom of the kettle. When only a small amount of fat is to be clarified, add to the cold fat some boiling water, stir vigorously and set aside to cool. The fat will form a cake on top of the water which may then be easily removed.

Liquid

Water is the only liquid used in making pastry. The preference seems to be for very cold or ice water. It is quite possible, however, to make good pastry with hot water, if the pastry maker is adept, in fact, skillful enough to do so. The hot water makes it necessary to put more flour on the board and the mixture has to be handled more. It is unwise for the unskilled to attempt and it has no recommendations over the cold water crust. Of course in making Puff Paste you must use ice cold water.



Utensils

For pastry making but few utensils are needed and those used should be simple.

A mixing bowl with round bottom

A case knife
A flour sifter
A spatula
2 measuring cups
A set of measuring spoons
A rolling pin
A spatula
Pie tins

Arrange these utensils so that they will be handy for the person who is to use them. Observe in the cut above how they are placed, so much depends on their convenient arrangement. The type of utensil too should be noted.

The **Rolling Pin** should be perfectly smooth wood. Solid Glass is often used but a wooden one is sufficient. Occasionally a special hollow rolling pin of glass is prepared for a puff paste. This can be filled with ice water or chopped ice. These are nice to have but are rather a

nuisance and unnecessary.

Mixing Board or Slab. The most preferable possibly is marble, because it is smooth and usually cool. A smooth wooden board is satisfactory if free from cracks and splinters. The porcelain topped table may also be used and sometimes proves most convenient if care is taken crust will not stick. The surface is so slippery, and the crust is apt to slide and have folds or wrinkles rolled into it, so wield your rolling pin carefully. A magic cover favored by a great many wives and cooks is made of heavy duck, which is an excellent cover but rather hard to clean.

Pie Plates may be of tin, enamel, earthenware, iron, glass or agate. Some of the tin or aluminum pans come with a perforated bottom for the better cooking of the under crust. If the crust is properly made a solid bot-

tom is satisfactory.



Making Level Baking Powder Measurements

Mixing Pastry and Baking

The first step in pastry making is measuring and sifting the dry ingredients into the mixing bowl, namely flour, salt and baking powder. When a person has once used baking powder as a leavening in their pastry they will not be apt to omit it, as the crust is bound to be more flaky.

The next step is chopping or working the fat into the flour, an operation which may be accomplished in three ways:



Measuring Shortening

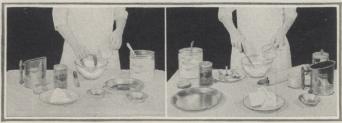


Chopping in the Shortening

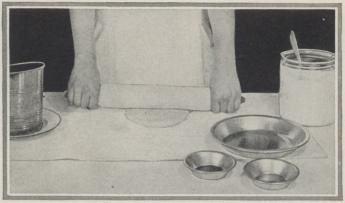
- 1. By chopping with one or two knives.
- 2. By using a pastry chopper (illustrated.)
- 3. By using a fork.

The most satisfactory method for one to employ is the one which gives them the best results. Some even use their hands for mixing the crust, but this is not recommended as the heat from the hands is apt to warm the crust and our object is to keep all ingredients as cold as possible, unless of course we are making a hot water crust.

The next step is that of adding liquid to the mixture of flour and fat. The mixture should be heaped up in the center of the bowl, then a depression made in it and the water poured into this, gradually cutting and stirring slightly all the time with a knife or spatula. Be very careful to add only enough water to make the fat just barely cling together. As soon as the water has



Adding Water



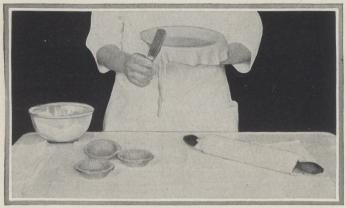
Rolling the dough out on a magic cover

been added take the mass of dough out onto the carefully floured molding board, floured canvas or other floured surface.

Roll out with the rolling pin until it is about ½ inch in thickness, using a light careful motion and keeping the piece of dough as nearly round as possible. After rolling is completed, cover the plate with crust, holding it carefully so that it will fit nicely on the plate. Press the crust lightly with the fingers in order to make it cling to the bottom and sides of pie tin, at the same time letting out the air from underneath the crust. When this is done the pan is ready for a one crust pie



Putting lower crust in Pie Plate



Trimming the crust

or for the bottom of a two-crust pie. If to be used for a one-crust pie, be sure you prick the sides and bottom of crust carefully so that it will not raise or puff up from the tin in baking.

Trim off the extra crust on edge with a knife and finish the edge by fluting with fingers or marking with

the prongs of a fork.

Glass, tin or aluminum or enamel pie tins may be used, according to choice. When a two-crust pie is to be made, place the filling on bottom crust, but do not prick the crust. Then roll out the top crust, making incisions in top to allow the escape of steam, otherwise



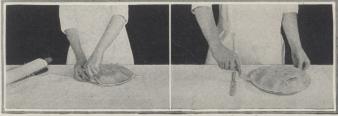
Pricking Pie Shells and marking edges



Making incisions in top crust

Putting water on edge of lower crust

it will push up the crust and spoil the appearance of the pie. Add sugar and a little flour mixed together, also dot with butter if desired. Moisten the edge of the lower crust, with a little water, putting it on with the finger.



Folding upper crust under

Pressing edges of crust together

Baking

As soon as the pie has been prepared bake as quickly as possible. Pastry needs a hot oven. When the contents of a pie need long cooking (like uncooked fruit) the pie should be started in a hot oven and after twenty minutes reduce the heat to moderate, and finish cooking. Pastry should be turned several times while baking to ensure even browning. Underdone pastry is both unpalatable and indigestible.



Fitting crust to tin

Applying strips of pastry

Recipes

Plain Pie Paste

3 cups flour
½ level teaspoon Calumet Baking Powder
Cold Water

1 level teaspoon salt 3/4 cup lard

Sift together dry ingredients thoroughly. Work in lard with knife or rounding edge of a tablespoon or spatula. Moisten to a dough with cold water. Put lightly on floured board, and roll thin, ready for use.

Quick Puff Paste

1 cup bread flour 1 tablespoon lard Cold Water 1/8 cup butter

Work lard into flour, first using knife then tips of fingers. Moisten to a dough with cold water, pat, and roll out same as Puff Paste. Dot paste with small pieces of butter, using one-third the quantity. Dredge with flour, fold from ends toward centre, then double, making four layers. Pat, and roll out. Repeat until butter is used. Roll, shape, chill, and bake in hot oven.

Hot Water Pie Crust

3 cups sifted pastry flour 1 level teaspoon Calumet Baking Powder ½ cup boiling water

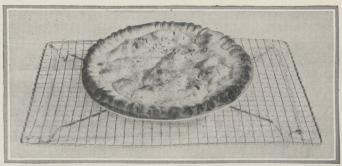
1 teaspoon salt
1 cup hard butter or
any solid shortening

Mix and sift flour, baking powder and salt. Rub in shortening and when the mixture is well blended, stir in the boiling water. Mix with a spoon at first, then with the hands. Turn out on a floured board and roll to desired thickness. Bake in a hot oven (425 degrees).

Pie Crust with Oil

1½ cups flour ¼ cup oil 2 tablespoons cold water ½ teaspoon baking powder ½ teaspoon salt

Beat oil with water. Stir into sifted dry ingredients and then proceed as with other pastry.



A Two Crust Pie

Apple Pie

About 4 tart apples 2 teaspoons butter Plain Paste ½ cup sugar

Peel, core and slice apples thin. Line pie plate with paste. Put in apples, sugar and a little water. Dot with butter. Wet edges, cover with paste rolled out very thin. Bake in a hot steady oven (350°-400° F.) until apples are cooked.

Note—Any green fruit pies can be made in similar manner to

above.

Note—To prevent juice of pies boiling out into oven, wet the edges when upper and lower crusts are joined, with thin paste, made of 1 teaspoon flour and 3 of water, instead of clear water.

Huckleberry or Other Berry Pies

1 quart fresh berries 1 cup sugar

2 to 3 tablespoons flour Few grains salt

Pastry for 2 crusts

Mix sugar and flour together. Line a medium sized pie plate with pastry, add berries and sprinkle with sugar and flour. Cover with second crust, press edges firmly together and prick top several times to allow escape of steam. Bake in hot oven-425 degreesabout 25 minutes.

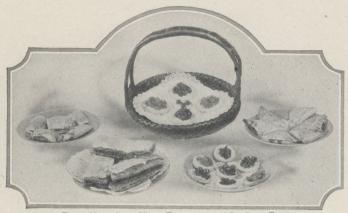
Raisin Pie

½ cup sugar 2 cups seeded raisins 1½ cups boiling water ½ teaspoon salt

3 tablespoons orange juice 2 tablespoons lemon juice 1 tablespoon grated lemon rind 2 tablespoons cornstarch

1 tablespoon grated orange rind ½ cup walnut meats

Cook raisins in boiling water for five minutes; pour into sugar
and cornstarch which have been mixed. Cook until thick, about five minutes. Remove from fire and add other ingredients. Bake between two crusts. Walnuts may be omitted if desired.



Tarts, Neopolitan Slices, Turnovers and Banbury Tarts

Macaroon Custard Tarts

Crust Filling 11/4 cups flour ½ pint cream ½ teaspoon Calumet Baking Powder 2 tablespoons flour 3/4 teaspoon salt 4 tablespoons powdered sugar 1/3 cup fat 1 tablespoon citron 1/4 cup water 3 macaroons Grated rind of 1/2 lemon 1 tablespoon orange juice 3 egg yolks

Sift dry ingredients; add liquid fat to water and mix well and cut into sifted dry ingredients. Toss on floured board, pat and roll out. Cook together cream, flour, sugar, finely chopped citron, crushed macaroons, lemon rind and orange juice. When mixture has begun to thicken remove from fire and add well-beaten egg yolks; then fill small pans lined with crust, and sprinkle chopped almonds over tops. Bake 15 minutes in moderate oven (350°).

Raspberry Tarts

6 baked tart shells 1 cup ripe raspberries ½ cup powdered sugar 1 cup thick cream

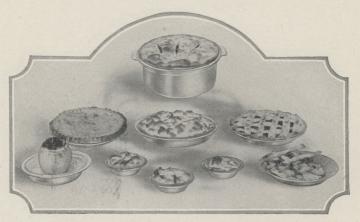
Whip the cream until it begins to get thick, then add the sugar, and continue whipping it until it will hold its shape. Crush the raspberries and fold them into the cream. Heap the mixture into the tart shells, garnish with whole raspberries and serve as soon as possible.

Banbury Tarts

1 cup raisins 1 cup sugar

1 cracker or 1 tablespoon bread crumbs

Juice and rind of 1 lemon
Chop raisins, add beaten egg, cracker and lemon. Roll plain or flaky pastry \(\frac{1}{8} \) inch thick, cut in pieces \(3\frac{1}{2}\x3 \) inches. Put \(2\) tsp. of the mixture on each piece, moisten edges, fold over and bake 20 minutes, in a hot oven-425 degrees.



One Crust Pies Custard Pie

3 tablespoons sugar $1\frac{1}{2}$ cups milk $\frac{1}{8}$ level teaspoon salt 2 eggs Few gratings nutmeg

Beat eggs slightly, add sugar, beat well and then add salt and milk. Line plate with plain paste and build up a fluted rim. Strain in mixture, and sprinkle with few gratings of nutmeg. Bake in a quick oven at first to set rim, decrease the heat afterwards, as egg and milk in combination need to be cooked at low temperature $(250^{\circ}-350^{\circ} \mathrm{F.})$

Butter Scotch Pie

Mix together in double boiler 3 tbsp. cornstarch, 2 tbsp. butter, 1 cup brown sugar, and beaten yolks of 2 eggs; then, gradually, add $1\frac{1}{2}$ cups milk, stirring constantly until smooth and thick. Flavor with 1 tsp. vanilla, and pour into previously baked crust. Whip up whites of the eggs, sweeten with 2 tbsp. sugar, spread over pie, and place in oven for a few seconds to brown.

Old Fashioned Pumpkin Pie

The pumpkin must be steam cooked and strained and kept as dry as possible. If desired canned pumpkin may be used. Mix all dry ingredients together and beat into the pumpkin. Beat eggs and add to milk and then beat all together into a smooth custard-like mixture. Line a deep pie plate with paste and lay a strip of pastry around the outer edge, pressing it down with the forefinger and then pinching the rim into a scalloped upstanding edge. Pour the custard into the plate and bake until crust is nicely browned and the custard is set.

Lemon Pie

3/4 cup sugar 3/4 cup boiling water 1 tablespoon cornstarch

2 eggs 3 tablespoons lemon juice Grated rind of 1 lemon

1 teaspoon butter

Mix cornstarch and sugar, add boiling water, stirring constantly. Cook two minutes, add butter, egg yolks and rind and juice of 1 lemon. Line a plate with Plain Paste. Put a rim ½ inch wide around rim; flute with the fingers first dipped in flour. Turn in edge, or cut pastry larger than plate and build up a mixture which has been cooled and bake until pastry is done. Cool slightly, fill, and cover with a meringue, then return to oven and bake meringue.



Using Pastry Tube to decorate with Meringue

To keep the Meringue from Watering

When the meringue is taken from the oven it should be allowed to stand in a warm, dry place until cold. If put into the refrigerator or into a cool cellar, its moisture will be likely to be condensed, and this may account for the "little spots of wet" you find so unsightly on the brown surface. When a meringue is found watery underneath, this proceeds from a different reason: Either it has been allowed to stand too long; or the mixing has been improperly done. In making meringue it is best to beat the whites of the eggs on a platter, until they pile up so that the platter can be inverted quickly—but not a stroke longer. Then add the sugar by degrees, and beat from the bottom, beating upwards, and continue to beat until the texture is finegrained.

Patty Shells

Roll puff paste ¼ inch thick. Shape with fluted round cutter, first dipped in flour. Remove centers from half the rounds with a smaller cutter. Brush the larger pieces with cold water near the edge and fit on the rings, pressing lightly. Place in a pan placed in a larger pan of cracked ice and chill until the paste is stiff. Place on baking pan covered with brown paper and bake 25 minutes in hot oven 435–50 degrees. Pieces cut from the centers of the ring may be baked and used for covers.

Salmon Pie

1 No. 1 can salmon 1 cup macaroni 1½ cups drawn butter sauce Pastry

Pastry

4 eggs
Remove skin and bones from salmon, cook macaroni and chop
eggs which have been hard cooked. Line baking dish with pastry,
put in layers of salmon and egg, and add sauce. Cover with crust
and bake.

Time in combining, 20 minutes. Time in cooking, 30 minutes.

Temperature 400 degrees.

Sweet Potato Pie

2 sweet potatoes, medium size ½ cup sugar 2 tablespoons butter 2 eggs

1/2 cup rich milk Cinnamon, allspice, nutmeg to season Mix and bake like pumpkin pie. Cover top with a meringue of 2 egg whites and 2 tablespoons sugar.

Cheese Sticks

1½ cups flour
½ cup shortening
½ teaspoon Calumet Baking Powder
23 cup grated chee

aking Powder 3/3 cup grated cheese Few grains cayenne

Mix and sift flour and salt. Rub in the shortening with a fork and add just enough ice water to make a stiff dough. Turn out on a floured board and roll to ¼ inch thickness. Sprinkle with half the cheese and a little cayenne. Roll the dough up like a jelly roll and then flatten out to ¼ inch thickness. Spread the rest of the cheese, fold and roll as before. Chill thoroughly, roll to ½-inch thickness and cut in strips about ¼ inch wide and 4 or 5 inches long. Place on a greased baking pan and bake in a hot oven—400 degrees—for 10 minutes or until a golden brown in color.

Napoleons

Roll flaky pastry or puff paste to ¼ inch thickness and bake in two large sheets, or cut in strips about two inches wide and 4 inches long. Prick before baking and bake in a hot oven 425 degrees—until puffed up and a golden brown. Cool, and put the two layers together with a thick layer of cream filling. Spread the top with confectioner's icing and sprinkle with chopped nuts. Garnish with a candied cherry Cut in pieces about four inches wide, using a very sharp knife.

Carmel Pecan Pie

4 egg yolks

½ cup granulated sugar

½ cup brown sugar ¾ cup milk

1 rounded tablespoon flour

2 tablespoons butter

1 cup of finely chopped pecans should be added to the carmel a few minutes before it is removed from the heat.

Let cool and place in pie shell. Cover with meringue made from egg whites.

Gooseberry Tarts

Line the tartlet pans with pastry. With a pair of kitchen scissors top and tail one pint and a half of fresh gooseberries; fill the tartlet pans with the gooseberries; pile high and cover with sugar. Lattice the top with crust and bake for fifteen minutes. Serve a little sifted sugar over the top and a pitcher of sweet cream, or a cup sour whipped cream or Devonshire cream on top.

Vinegar Pie

Boil together two cups of water, one cup of vinegar, one cup of molasses, two tablespoonfuls of butter, and from one-half to one cup of raisins. As soon as boiling has begun have ready mixed one cup each, of sifted flour and dark brown sugar, and two teaspoonfuls of powdered cinnamon. Success depends on the thorough mixing of these, otherwise the pie will be lumpy. Remove the boiled mixture from the fire, and put in, all at once, and not gradually, the whole of the dry ingredients, mixed, then stir vigorously until the whole is smooth. Replace over fire, and keep stirring until the mixture is thick, but do not allow it to boil before pouring into the pastry lined pie plate. Bake while still warm, without an upper crust.

Kewpie Pies

13/4 cups pastry flour

2 egg yolks

3 teaspoons Calumet Baking Powder ½ teaspoon salt 1 cup milk

1 tablespoon melted butter 2 egg whites Fruit or hard sauce

Jam, fruit or preserves

Sift dry ingredients. Mix egg yolks and milk and add to dry mixture. Beat well, add butter and fold in stiffly beaten egg whites. Pour a thin layer in the bottom of buttered individual casserole dishes or egg shirrers. Spread a layer of jam, preserves or fresh fruit quickly over the batter. Cover the fruit with batter and bake in a quick oven until puffy and brown. Serve at once with fruit or hard sauce.

Fresh peaches, apple sauce, berries of all kinds as well as jams and preserves may be used.

Points to Remember

To Keep the Lower Crust from Becoming Soggy

There is the problem of the soggy under-crust. An under-crust can never be as crisp as the upper, but it need not be unpleasantly spongy. Proper baking, and hot oven for at least the first part of the period, has much to do with it. Chilling the crust and cooking the filling before the two are put together is a help. As an extreme measure brush over the crust with white of egg and partially bake it before putting in the filling. When a cooked filling is to be put into a previously baked shell have both the pastry and filling as cool as possible.

To Prevent Juice from Escaping

There are several suggestions for preventing juice from escaping. One is a small piece of paper rolled into a funnel shape leaving both ends open and inserting the small end in one of the openings in the top crust. This makes a vent for the escape of steam. A strip of clean cotton cloth about one and one-fourth inches wide, wrung out of water and wound around the edge of the pie, sort of seals in the juice.

To Keep Custard Pie Filling from Separating

The temperature for baking custard pie is supposed to be 250 degrees Fahrenheit, but this, in part, depends on the size of the pie; for a large, deep pie calls for a lower temperature than a small, shallow one. How long a custard pie takes to bake depends on several factors. If made with the yolks of eggs, alone, it takes a shorter time than if made with the whole eggs. The proportion of the eggs to the milk, also affects the time, for a pie made with one egg to a cup of milk will take longer than when a larger proportion of eggs is used. A large, deep pie naturally takes longer than a small, shallow one; and curiously enough the freshness of the eggs affects the time needed for cooking. No exact rule can be given for baking this pie, except the old fashioned one, to bake until it is firm when tested with knife.