

## Whole Wheat Sourdough Pie Crust



Here I wanted to make pie crust that would be tender, slightly sweet and like a soft shortbread in texture, for apple pie, for pumpkin pie or various egg custard tarts requiring a prebaked crust. My other requirement both for pastry and filling was that I could eat it as daily fare, and not just as an indulgent confection. Hence the reliance on naturally sweet ingredients rather than added sugar.

Making bread in its simplest form requires only a short amount of hands-on time, so I gladly change the flour and water proportions, add olive oil or butter or almond butter and make this leavened sourdough pie crust in the same 7 to 8-hour time frame that I use to make bread dough. The amounts of fat in each of these recipes are similar and minimal.

The dough is quite stiff so it will be easiest if made in a stand mixer with a paddle. Sometimes the mixing bowl for these mixers needs to be held in place with clips. For example, a Kitchen Aid stand mixer bowl needs bowl clips to hold it in place when mixing a stiff pasta dough.

For a light colored and soft crust, I choose a white wheat or durum wheat whole grain flour.

*Please note that the sourdough starter used in these recipes is of a particular style, other starters may not give satisfactory results. The recipe for the malt sourdough starter used here can be found at [www.wholegrainconnection.org](http://www.wholegrainconnection.org). the direct link is: <http://www.wholegrainconnection.org/sitebuildercontent/sitebuilderfiles/3simplemaltsourdoughstarter.pdf>*

## Olive Oil · Whole Wheat Sourdough Pie Crust

Amounts are for 2 x 8-inch diameter blind crusts or 2 x 6-inch diameter galettes or 1 covered 8-inch diameter pie.

Ingredients	Amount in grams	Bakers percent
Whole wheat flour	250	100
Wheat or barley malt flour	12.5	5
Salt (fine grind)	3.8	1.5
Olive oil	37.5	15
Water	100 - 125	40 - 50
Sourdough starter	25	10

[] Add whole wheat flour, malt flour and salt to mixing bowl. Mix.

[] Add olive oil and work the oil evenly into the flour mixture.

*This can be managed by hand with a fork, or by using a paddle in a stand mixer or with a blade in a food processor.*

[] In a separate container mix the water and sourdough. Add to flour and oil mixture.

[] Mix to a stiff but smooth and pliable dough.

*Mix by hand, or in stand mixer (with bowl clamps), or in food processor. Dough should be stiff enough to withstand rolling out very thinly, but not so stiff as to be crumbly. Use more, or less water accordingly.*

[] Divide dough into 2 pieces and form each piece into a ball. Closely cover dough balls with moist cloth, inside a covered bowl. Leave to rise for 4 hours at 86°F (30°C).

[] Re-knead and re-form each dough ball. Return to covered bowl for approximately 15 minutes before preparing tart or pie crusts.

## *Butter · Whole Wheat Sourdough Pie Crust*

*Amounts are for 2 x 8-inch diameter blind crusts or 2 x 6-inch diameter galettes or 1 covered 8-inch diameter pie.*

<i>Ingredients</i>	<i>Amount in grams</i>	<i>Bakers percent</i>
Whole wheat flour	250	100
Wheat or barley malt flour	12.5	5
Salt (fine grind)	3.8	1.5
Butter (warmed to 86°F)	50	20
Water	100 - 125	40 - 50
Sourdough starter	25	10

[] Add whole wheat flour, malt flour and salt to mixing bowl. Mix.

[] Add warm butter and work the butter evenly into the flour mixture.

*This can be managed by hand with a fork, or by using a paddle in a stand mixer or with a blade in a food processor.*

[] In a separate container mix the water and sourdough. Add to flour and butter mixture.

[] Mix to a stiff but smooth and pliable dough.

*Mix by hand, or in stand mixer (with bowl clamps), or in food processor. Dough should be stiff enough to withstand rolling out very thinly, but not so stiff as to be crumbly. Use more, or less water accordingly.*

[] Divide dough into 2 pieces and form each piece into a ball. Closely cover dough balls with moist cloth, inside a covered bowl. Leave to rise for 4 hours at 86°F (30°C).

[] Re-knead and re-form each dough ball. Return to covered bowl for approximately 15 minutes before preparing tart or pie crust.

## Almond Butter · Whole Wheat Sourdough Pie Crust

Amounts are for 2 x 8-inch diameter blind crusts or 2 x 6-inch diameter galettes or 1 covered 8-inch diameter pie.

Ingredients	Amount in grams	Bakers percent
Whole wheat flour	250	100
Wheat or barley malt flour	12.5	5
Salt (fine grind)	3.8	1.5
Almond butter	75	30
Water	100 - 125	40 - 50
Sourdough starter	25	10

[] Add whole wheat flour, malt flour and salt to mixing bowl. Mix.

[] Add almond butter and work the almond butter evenly into the flour mixture.

*This can be managed by hand with a fork, or by using a paddle in a stand mixer or with a blade in a food processor.*

[] In a separate container mix the water and sourdough. Add to flour and almond butter mixture.

[] Mix to a stiff but smooth and pliable dough.

*Mix by hand, or in stand mixer (with bowl clamps), or in food processor. Dough should be stiff enough to withstand rolling out very thinly, but not so stiff as to be crumbly. Use more, or less water accordingly.*

[] Divide dough into 2 pieces and form each piece into a ball. Closely cover dough balls with moist cloth, inside a covered bowl. Leave to rise for 4 hours at 86°F (30°C).

[] Re-knead and re-form each dough ball. Return to covered bowl for approximately 15 minutes before preparing tart or pie crusts.

## Milk · Whole Wheat Sourdough Pie Crust

Amounts are for 2 x 8-inch diameter blind crusts or 2 x 6-inch diameter galettes or 1 covered 8-inch diameter pie.

Ingredients	Amount in grams	Bakers percent
Whole wheat flour	250	100
Wheat or barley malt flour	12.5	5
Salt (fine grind)	3.8	1.5
Dried non-fat milk	2.5	1
Butter (warmed to 86°F)	50	20
Water	100 - 125	40 - 50
Sourdough starter	25	10

[] Add whole wheat flour, malt flour, salt and dried milk to mixing bowl. Mix.

[] Add warm butter and work the butter evenly into the flour mixture.

*This can be managed by hand with a fork, or by using a paddle in a stand mixer or with a blade in a food processor.*

[] In a separate container mix the water and sourdough. Add to flour and butter mixture.

[] Mix to a stiff but smooth and pliable dough.

*Mix by hand, or in stand mixer (with bowl clamps), or in food processor. Dough should be stiff enough to withstand rolling out very thinly, but not so stiff as to be crumbly. Use more, or less water accordingly.*

[] Divide dough into 2 pieces and form each piece into a ball. Closely cover dough balls with moist cloth, inside a covered bowl. Leave to rise for 4 hours at 86°F (30°C).

[] Re-knead and re-form each dough ball. Return to covered bowl for approximately 15 minutes before preparing tart or pie crusts.

### *For tart crusts*

[] Prepare oven proof tart dishes, preferably unglazed ceramic that need no greasing. Roll out each dough ball to a disk to approximately one eighth inch thickness or less, and approximately 10 inches in diameter. Line tart dish. Trim off excess dough. Crimp the edge. Use a fork to prick the tart pastry base to prevent the dough from bubbling when baked.

[] Leave to rise for 2 hours at 86°F with steam or humidity

[] In a steam oven. Steam bake at 250°F with 100% steam for 30 minutes.

[] Allow to cool a little, before checking that tart case can be easily lifted out of dish and is baked sufficiently. When dish and tart case have cooled return tart case to tart dish ready for filling.

### *For galettes*

[] Roll out each dough ball to a disk approximately one eighth inch thickness or less, and approximately 10 inches in diameter, taking care to keep the edge of the pastry unbroken. Add the fruit filling to the center of the pastry disk leaving a rim of 1-2 inches. Fold the pastry rim towards the center and pleat it evenly all around.

[] Place galettes on baking parchment paper and on a baking sheet or in a baking dish. Leave to rise for 2 hours at 86°F with steam or humidity.

[] Steam bake at 250°F with 100% steam for 30 - 45 minutes or more, until the pastry is sufficiently baked.

[] Remove galettes from baking sheet and allow to cool on a rack.

### *For a covered pie*

[] Prepare an oven proof pie dish, preferably unglazed ceramic that need no greasing. Roll out one dough ball to a disk approximately 10 inches in diameter. Line pie dish. Add pie filling.

[] Roll out second dough ball to a disk approximately 10 inches in diameter and cover pie. Trim off excess dough. Crimp the edge. Cut a design in the top crust for steam escape during baking.

[] Leave to rise for 2 hours at 86°F with steam or humidity

[] Bake pie at temperature and time according to chosen filling. *For example, bake for at least one hour at 250°F with 100% steam, for an apple pie with apple sauce filling. Use a longer time for heavier ceramic pie dishes. Dough should be springy when cooked; pastiness suggests undercooking.*

## Some suggested tart and pie fillings

Amounts approximately for an 8-inch tart or pie

These pie fillings are intended for everyday pies and tarts. There is no added sugar to make them indulgent confections in either the pie dough or pie filling. The fat content of the pastry is due to olive oil, almond butter, or butter in amounts smaller than generally used for pastry.

For sweet pastry fillings almond butter, raisin paste, and naturally sweet apple sauce can be combined and spiced or mixed with cocoa to make sweet and exciting fillings for pastry, without adding sugar. See *Fruit and Nut Extravaganzas* in the recipe section at [www.wholegrainconnection.org](http://www.wholegrainconnection.org)

### Kabocha squash, apple, and raisin tart (Pumpkin Pie)

Ingredient	Amount
Pre-cooked naturally sweet Kabocha squash pulp	200 ml (approximately $\frac{3}{4}$ cup)
Naturally sweet apple sauce (thick) and Raisin paste	50 mL (approximately $\frac{1}{4}$ cup)
Pumpkin pie spice (Cinnamon, Ginger, Allspice, Nutmeg, Cloves)	1 gram (1 teaspoon)
Eggs	2 yolks and 2 whites
Milk or Yogurt	50 mL (approximately $\frac{1}{4}$ cup)
Prebaked pie crust	8-inch diameter

[] Combine squash pulp, apple sauce, raisin paste and spice in a food processor with metal blade.

[] Separately, lightly whisk eggs and milk together. Add to food processor. Blend for a few seconds until smooth and evenly mixed.

[] Use a jug to pour the filling into a prebaked pie crust.

[] Bake with 50% steam at 250°F for 60 minutes, or longer until the filling is firmly set.

[] Allow to cool to room temperature on a rack, before serving. Refrigerate at 40°F(4°C) if serving the next day.

## *Cinnamon Raisin & Apple Galette*

<i>Ingredients</i>	<i>Amount</i>
Raisins	63mL (¼ cup)
Ceylon Cinnamon or pumpkin pie spice	0.5 gram (½ teaspoon)
Orange & lemon zest	To taste
Naturally sweet apple sauce (thick)	125 mL (½ cup)
Whole wheat sourdough pie dough	Made with 125 grams whole wheat flour

[] Combine raisins with spice and zest of orange and lemon.

[] Add raisin mixture to apple sauce and mix well.

[] Roll out a 10-inch diameter disk of pie dough and place it on baking paper.

[] Spread fruit mixture on center of 10-inch diameter disk of pie dough, leaving a 1 to 2-inch rim of dough. Fold dough edge towards center and pleat it all around.

[] Place galette on paper onto baking sheet or into baking dish. Leave to rise for 2 hours at 86°F with steam or humidity.

[] Steam bake at 250°F with 100% steam for 60 minutes or more, until pastry is springy to touch.

[] Remove galette on paper from baking sheet and allow to cool on a rack before serving. Refrigerate at 40°F (4°C) if kept until the following day.



## Raspberry & Apple Custard Tart

*Other fruit concentrates such as blueberry concentrate can be substituted for the raspberry -apple concentrate.*

<i>Ingredients</i>	<i>Amount</i>
Fresh raspberries	170 grams (small box)
Naturally sweet apple sauce	250mL (1 cup)
Prebaked pie crust	8 -inch diameter
Eggs	2 yolks and 2 whites
Milk or yogurt	125mL (½ cup)
Vanilla essence	1 teaspoon

[] Simmer raspberries with enough water to barely cover berries. Cook until the berries disintegrate; approximately 20 minutes. Strain off the seeds with a conical sieve or similar and keep the juice.

[] In a saucepan, combine raspberry juice with apple sauce and simmer until of jam consistency.

[] When cool, add this raspberry apple concentrate to the prebaked pie crust; spread it evenly.

[] Whisk together eggs, milk (or yogurt) and vanilla essence. Pour this into the prebaked pie crust on top of the apple raspberry concentrate.

[] Bake with 50% steam at 250°F for 60 minutes or longer until well set.

[] Allow to cool on a rack before serving. Refrigerate at 40°F (4°C) if kept until the following day.

## Yorkshire Curd Cheese Tart

*Sweetness in this Yorkshire Curd tart is entirely due to the very sweet currants. The variation here is to blend the cottage cheese until smooth. In Yorkshire, England, the curds of cottage cheese are not blended and are left whole to produce a curd texture.*

<i>Ingredients</i>	<i>Amount</i>
Prebaked pie crust	8 - inch diameter
Currants	100 grams (¾ cup)
Cottage cheese	250 grams (1 cup)
Egg	2 yolks and 2 whites
Lemon zest	To taste
Butter	Knob to taste
Nutmeg (freshly grated)	To taste

[] Spread currants evenly onto pastry case.

[] In a food processor fitted with a blade: combine cottage cheese, eggs, lemon zest and butter. Process briefly until completely mixed and smooth.  
*Optionally, add mixture to a jug for easy pouring.*

[] Pour the cottage cheese mixture evenly over the currants in the pastry case. Sprinkle freshly grated nutmeg on the surface.

[] Bake with 50% steam at 250°F for 60 minutes or longer until well set.

[] Allow to cool on a rack before serving. Refrigerate at 40°F (4°C) if kept until the following day.