Pilly Putty

CULTIVATED CARE · HEARTLAND BOTANICALS

Makes: About 45 pockets, each the size of a commercial capsule-size pill pocket.

A soft, foldable putty that seals around a capsule or tablet. Halve everything for a smaller batch or double it for a larger one.

Why this one works when other homemade versions don't

Read the ingredient list on a bag of commercial pill pockets and **glycerin sits second, ahead of the flour**. That is what keeps them foldable in the bag instead of drying into a pebble.

Most homemade recipes skip it and use peanut butter to do the softening instead. That works for two days, then they harden. Food-grade vegetable glycerin is inexpensive, sold in the baking and soap-making aisles and online.

Step 1 Make the dough *(10 min + 20 resting on counter)*

WHAT YOU NEED

DRY INGREDIENTS	HOW MUCH	NOTES
Oat flour, certified gluten-free	1½ cups (150 g)	Plain oat flour is often cross-contaminated with wheat
Tapioca starch	3 Tbsp (25 g)	This is what makes it stretch and seal
Citric acid powder	¼ tsp	Slows mold. More turns it sour
Your flavor base, table below	¼ to ½ cup	Dry ones go in the mix; baby food or peanut butter goes in wet

Pumpkin puree - ¼ cup
Plain canned pumpkin

Vegetable glycerin, food grade - 3 Tbsp
The ingredient that keeps them soft

Water - 4 to 6 Tbsp, depending on the flavor base
Heated, then added last (step 4).

FLAVOR BASE — CHOOSE ONE, OR BLEND TWO

BASE	HOW MUCH PER BATCH	NOTES
Freeze-dried liver powder	¼ cup	Strongest smell, highest acceptance, costs the most
Defatted peanut flour or cheddar cheese powder	⅓ cup	Interchangeable. Peanut flour: roasted peanut aroma, about 50% protein, inexpensive
Nutritional yeast	½ cup	Savory and mild, costs the least
Sardine or bonito powder	¼ cup	Very strong — good for dogs off poultry and beef

HOW TO DO IT

1. **Toast the oat flour.** Dry stainless skillet, medium-low, 4–5 minutes, stirring, until it smells nutty. Cool it completely. Don't skip this; untoasted oat flour tastes like paste.
2. **Whisk the dry together:** cooled flour, tapioca starch, flavor base, citric acid. Break up any lumps now.
3. **Combine the wet.** Stir the pumpkin, baby food or peanut butter into the glycerin.

4. **Heat the water.** Use a hot pot or microwave to bring it to about 180°F: steaming, short of a boil. Add the hot water last, stir and add to the dry immediately. The heat cooks the tapioca starch so it stretches and seals.
5. **Mix to a dough.** Work it with a spoon and then your hands, or use a stand mixer. You're aiming for **soft modeling clay**: dense, holds a thumbprint, doesn't stick to your palms. Too sticky, add a little oat flour a teaspoon at a time. Too crumbly, add water just off the boil, a tablespoon at a time, and rest it 5 minutes after each.
6. **Rest it 20 minutes**, covered, on the counter. Don't skip this step, or they will be crumbly and fall apart.
7. **Check it again.** Too sticky or too crumbly, fix it the same way as in step 5.

Step 2 Shape them

Shaping is optional. The putty works as a treat exactly as it is — pinch off a piece and hand it over.

1. Roll the dough into a log about ¾ inch thick and cut it every inch.
2. Each piece is about a **heaping teaspoon** — it rolls into a ball a little smaller than a grape. That's the same size as a commercial capsule pocket.
3. Press a hole most of the way through with the round end of a chopstick or the back of a wooden spoon handle.

Using peanut butter instead *(and what it costs you)*

Check the jar for xylitol first, also listed as **birch sugar**. It is toxic to dogs and can be fatal, and it turns up in reduced-sugar peanut butters.

Most people are going to reach for the jar of creamy peanut butter in the cupboard, because it's already there and dogs love it. Here's roughly what it does to the treat.

VERSION	FAT	CALORIES PER POCKET	PROTEIN
Pumpkin, no peanut butter	3.6%	20	9.8%
Half and half — 3 Tbsp peanut butter + ¼ cup pumpkin	9.8%	23	9.2%
Peanut butter — 6 Tbsp, no pumpkin	17.2%	29	13.0%
Greenies Pill Pockets (Mars Petcare), capsule size — label comparison only	*9.0% min*	*23*	*12.0% min*

Read that bottom row carefully. *Those are the guaranteed-analysis **minimums** printed on the bag, not measurements — the actual product contains at least that much fat and protein, and typically more. The rows above it are calculated from ingredient values, not laboratory-tested. Both columns are as fed; this dough runs a little wetter than the commercial pocket, so on a dry-matter basis the fat gap narrows slightly.*

Half and half lands closest to the commercial pocket — 9.8% fat against a 9.0% floor.

Straight peanut butter is well past the commercial figure and almost 50% more calories than the pumpkin version, which also means fewer pockets fit inside your dog's daily treat allowance. For a dog with a history of pancreatitis, gallbladder disease, or a weight problem, use the pumpkin version.

The pumpkin version is low fat because of the pumpkin. Pumpkin carries the moisture peanut butter would otherwise carry, at almost no fat.

When you use peanut butter, use the same 3 Tbsp glycerin and 4 to 6 Tbsp water. Peanut butter does not cut the liquid.

Swapping for allergies and preferences

Every part of this recipe has a substitute. Find what your dog can't have, or simply won't eat.

IF YOUR DOG CAN'T HAVE	SWAP OUT	SWAP IN
Grain	Oat flour	Chickpea flour, cup for cup — nothing else changes
Grain and legumes	Oat flour	Almond flour 1¼ cups + tapioca 6 Tbsp
Peanuts and tree nuts	Peanut flour or peanut butter	Liver powder, sardine powder, nutritional yeast
Chicken	Chicken liver powder, chicken baby food	Beef or pork liver, turkey, lamb, sardine
Beef	Beef liver powder	Turkey, lamb, sardine, peanut
Yeast	Nutritional yeast	Liver powder, sardine powder, peanut flour

Chickpea flour is the easiest grain-free swap — cup for cup, nothing else in the recipe changes. Toast it the same way you'd toast the oat flour, and toast it properly, because untoasted chickpea flour is bitter.

Almond flour works grain-free and legume-free, with one catch: it's ground nuts and has no starch in it, so it won't hold together on its own. Use **1¼ cups almond flour plus 6 Tbsp tapioca** in place of the oat flour. Expect a richer pocket — around 18.2% fat and 25 calories each, similar to the straight peanut butter version.

Goat milk powder at ¼ cup goes the other direction — mild and sweet, for dogs who dislike strong savory smells.

Meat flavors, using baby food

A **2.5 oz jar of Stage 1 single-ingredient meat** is a clean, inexpensive way to run chicken, turkey, beef or lamb versions without cooking anything. One jar makes one batch. Stage 1 meats are meat, water, and cornstarch. Stage 2 and Stage 3 dinners are a different product with a much longer ingredient list — stay in Stage 1.

Baby food is the one version that lives in the fridge. Stage 1 meat is about 75–80% water, and no amount of glycerin makes that counter-safe. Once the meat goes in: **5 days refrigerated, or freeze it the day you make it.**

Turkey is the leanest of the Stage 1 meats. Chicken and beef carry more fat. Skip the ham — it's the one cured, salted option in that lineup.

Keeping the dry part premixed

The dry ingredients keep on their own, so premixing a jar turns a batch into a ten-minute job. This isn't a different version — it's the same recipe with the dry half done ahead.

The jar (makes two batches, about 90 pockets):

INGREDIENT	HOW MUCH
Oat flour, certified gluten-free, toasted	3 cups
Tapioca starch	6 Tbsp
Citric acid powder	½ tsp
Flavor base, dry ones only	**Double your base's per-batch measure** — so ½ cup liver or sardine, ⅔ cup peanut flour, 1 cup nutritional yeast. Baby food or peanut butter goes in at batch time

Whisk together and store in an airtight container. What limits it is the fat in the flour and the flavor base going stale, not spoilage — so the colder you keep it, the longer it holds.

WHERE YOU KEEP THE JAR	HOW LONG
Cupboard, cool and dark	3 months
Fridge	6 months
Freezer, in a mylar bag	1 year

If you store the dry mix in the fridge or freezer, let it come back to room temperature before you open it. A cold jar opened in a warm kitchen pulls condensation straight into the mix. Moisture will ruin it.

To make a batch: use half the jar, plus the wet below.

WHAT YOU STIR IN	WHAT YOU GET
3 Tbsp glycerin + ¼ cup pumpkin + 4 to 6 Tbsp water	**Counter or fridge** — 2 weeks
3 Tbsp glycerin + one 2.5 oz jar Stage 1 meat + 4 to 6 Tbsp water	**Fridge only** — 5 days
3 Tbsp glycerin + 3 Tbsp peanut butter *(xylitol-checked)* + ¼ cup pumpkin + 4 to 6 Tbsp water	**Counter or fridge** — 2 weeks

What to do with the rest of the can

A batch uses a quarter cup of pumpkin, and a can holds about two cups — so you'll have most of it left over.

Stir the remainder into their dinner, or serve it as its own treat **with a dash of cinnamon**. Whatever you won't use in the next few days goes into an ice cube tray and then into a freezer bag. One cube is about right for one dog's dinner.

Buy plain canned pumpkin, not pumpkin pie filling. The label should say pumpkin and nothing else.

The two preservatives, and what each one actually does

They aren't interchangeable, and neither one covers for the other. Neither one makes this shelf-stable the way a commercial product is.

Citric acid slows mold. It lowers the pH of the dough, which makes it a less comfortable place for mold to grow. It does not prevent mold, and there's no way to confirm at home that the pH landed where you wanted it. A quarter teaspoon per batch — more than that and the dough turns sour enough that some dogs notice.

Rosemary extract (not essential oil) and mixed tocopherols slow rancidity. They're antioxidants. They do nothing about mold.

How much you need depends on which version you made. At 3.6% fat, the pumpkin version barely needs one. At 17 to 18%, a peanut butter or almond batch benefits, and it's worth adding if you're keeping it more than a week. Use the dose on the bottle's own label.

If your dog has seizures, use mixed tocopherols — vitamin E — and leave the rosemary out. The documented concern is with rosemary *essential oil*, which is a different preparation at a much higher concentration. Whether the extract at antioxidant levels carries any of that has not been studied in dogs with seizures, so there is no finding to lean on either way. Tocopherols do the same job here.

Check before every use.

Storing it *(shelf life & what to watch for)*

WHAT YOU MADE	WHERE	HOW LONG
No baby food	Airtight, counter or fridge	About 2 weeks
Baby food	Airtight, fridge only	5 days
Dry mix	Airtight	Cupboard 3 months · fridge 6 months

A commercial pocket lasts because the manufacturer measures water activity and formulates to a target. A home kitchen can't measure water activity. These also have no synthetic preservative.

THROW IT AWAY IF YOU NOTICE ANY OF THESE

Smell: Sour, musty, or rancid. Fresh putty smells like whatever flavor base you used.

Look: Fuzzy mold, any spotting, or moisture beading on the surface.

Texture: A slick or tacky film, or pockets that have gone slimy.

Freeze only the dry mix.

Frozen in a mylar bag, the dry mix keeps for a year.

The dough is hydrated starch, and it weeps when it thaws. Ice crystals rupture the matrix and the water comes back out separately. The glycerin pushes back against that — it's a cryoprotectant and there's less free water in it to freeze — but the baby-food batch, with the most free water, would come back worst.

Label the container with the flavor base, the date you made it and the discard-by date.

Nutrition

Serving	1 pocket, one per pill
Makes	About 45 pockets
Per pocket	20 to 29 calories · 9 to 13% protein · 3.6 to 18% fat, depending on the flavor base

If it's not working

WHAT'S HAPPENING	WHAT TO CHANGE
Dog is suspicious of it	Raise a liver or sardine base to ⅓ cup, blend liver and peanut, or switch to sardine powder
Pocket won't stay pinched shut	Next batch, make sure the water reaches about 180°F in step 4 so the tapioca cooks, and press each seam firmly with a thumb.
Dough was fine, then went crumbly	You skipped the 20-minute rest. Work in water just off the boil, a tablespoon at a time, and rest it 5 minutes after each
They dried out by day three	Not enough glycerin. Check the measure: 3 Tbsp, not 3 tsp
Dog needs low fat	Pumpkin version, liver powder or nutritional yeast base, no peanut butter, turkey if you're doing meat

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