

Food Safety Meat Models, FMNP “no-bake” version

For demonstrating how rapidly bacteria multiply at room temperature

This recipe makes ~2 sets of Meat Models (between 10 to 13 mounds of “meat”)

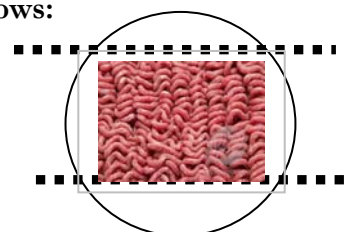
4 CUPS of FLOUR
 2 CUP of SALT
 1 CUP of WATER
 1 BOX of SUGAR-FREE RASPBERRY
 FLAVORED GELATIN

5 ONE-POUND STYROFOAM MEAT TRAYS
OR 6” SMALL PAPER PLATES
 1 BAG SPLIT PEAS—YELLOW or GREEN
 SPRAY POLYURETHANE VARNISH
 SPRAY ADHESIVE or GLUE

1. Measure and mix 2 cups flour, 1 cup salt and ½ box of gelatin. Slowly add ½ cup of water and mix with hand or spoon. To make dough easier to handle a little more water may be added.
2. Repeat process with remaining flour salt and the other ½ box of gelatin. **DO NOT MIX ALL FLOUR, SALT and GELATIN AT ONCE** for best results. Slowly add ½ cup of water and mix with hand or spoon. **For this step, be careful with the amount of water added!** You may need to add small amounts of water until the powdery mixture just barely holds it together in a dough. (Try to avoid overly-sticky dough).
3. Lightly coat inside of meat grinder with vegetable oil to avoid sticking. Put 1 batch of the mixture through a meat grinder using coarse grind.
4. Put second batch of mixture through the meat grinder.
5. Form “meat” into 5 equal mounds after it is ground. (About 4 to 4 ½ inches long). Put the meat models on a tray lined with newspaper.
6. Let meat models dry completely (may take up to 3-4 days). When ½ dry, scoop out some of the red dough from underneath each meat model to “hollow out”. (This will make it less heavy when the model dries)
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7. When meat models have **dried completely**, place on newspaper. Spray the meat models with polyurethane spray outdoors or in a well-ventilated area. You can bush on liquid urethane but it takes much longer to dry. Allow to dry thoroughly (may take up to 24 hours).
8. Count out the following amounts of split peas: 5---20---80---320---1280.  
 Apply peas to meat models using spray adhesive or glue. To apply the 1280 peas on the meat model it is easier to layer them on. Apply one layer of peas, spray and allow to dry before applying another layer. Do this until all are applied.
9. After thoroughly dry, place meat models on the Styrofoam meat trays OR small 6” paper plates (with top and bottom of plates folded so plate is the width of the meat model—see below). Wrap each with clear plastic wrap, seam on bottom of tray/plate. Tape the seam. Plastic tubs or zip-top bags also work well for transport and display.

**Make a label for each model (to be placed on bottom of tray/plate) as follows:**

From refrigerator---- 5 bacteria  
 After 30 minutes----- 20 bacteria  
 After 60 minutes----- 80 bacteria  
 After 90 minutes----- 320 bacteria  
 After 2 hours----- 1280 bacteria



*Adapted from: Yvonne Wilcox, Nutrition Teaching Assistant, Cornell Cooperative Extension of Tompkins County*

**SHOPPING LIST**

**To make 8 sets of Meat Models, buy:**

*5 pound bag of flour (1 bag contains ~16 cups of flour)  
3 large containers of salt  
4 boxes of sugar-free raspberry gelatin  
3 bags of split peas*