

Rhode Island Department of
Environmental Management 2023
Air Pollution Inventory Bakery / Bread



Facility Name

Signature of Person Completing Form

Date

For each product, formula or recipe name please provide the following information:

Product, Formula or Recipe Name	Pounds of Product produced	Initial amount of Yeast as a Percent of Flour	Total Ferment Time	Yeast Spike as a percent of flour	Spike time (in hours)
<i>Example: hard rolls</i>	<i>100,000 lbs</i>	<i>2.4%</i>	<i>3 hours, 30 minutes</i>	<i>1%</i>	<i>1 hour</i>

Return Form to:
DEM.AirInventory@dem.ri.gov
Air Pollution Inventory, Office of Air Resources 235
Promenade Street, Providence, RI 02908-5767

API Form Y

Instructions for Bakery Form

Emissions of ethanol from baked yeast products are calculated using the following calculation:

$$\text{VOC emitted (lb/lb of bread produced)} = 0.95Y_i + 0.195T_i - 0.51Y_s - 0.86Y_{s+1} + 1.90$$

Initial Yeast (Y_i): This is the initial amount of yeast added to the flour and should be reported as a percent of flour to the nearest tenth of a percent. (*Pounds of yeast per 100 pounds of flour in the mix*)

Ferment Time (T_i): This time is the first yeast action time and begins with the first mixing of yeast with water until the end of the initial ferment time at which time the bread enters the oven or a yeast spike is added. Time should be reported in hours and minutes.

Yeast Spike: This is the additional amount of yeast added after the first ferment. This should be reported as a percent of flour to the nearest tenth of a percent.

Spike Time: This time begins after the initial ferment time when the yeast spike is added and ends at the end of the final ferment (*time at which the product goes into the oven*). The time should be reported in hours and minutes