9.9.6 Bread Baking

USEPA Recommendation for Estimating VOC Emissions from Bread Bakeries

The Emissions Inventory Branch recommends the equation given in "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992) for estimating VOC emissions from yeast-raised bread baking point sources. The equation is:

$$\text{VOC E.F.} = 0.95Y_i + 0.195t_i - 0.51S - 0.86t_s + 1.90$$

where

VOC E.F.	= pounds VOC per ton of baked bread
Y_i	= initial baker's percent of yeast
t_i	= total yeast action time in hours
S	= final (spike) baker's percent of yeast
t_s	= spiking time in hours

This equation will be incorporated into a future revision of AP-42 section 9.9.6. Full details on the derivation and use of the equation are contained in the ACT document cited above. Copies of the ACT document are available - as supplies permit - from the Library Services Office (MD-35), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. It is also available for $27.00 (stock number PB93-157618) from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161, phone (800) 553-6847.