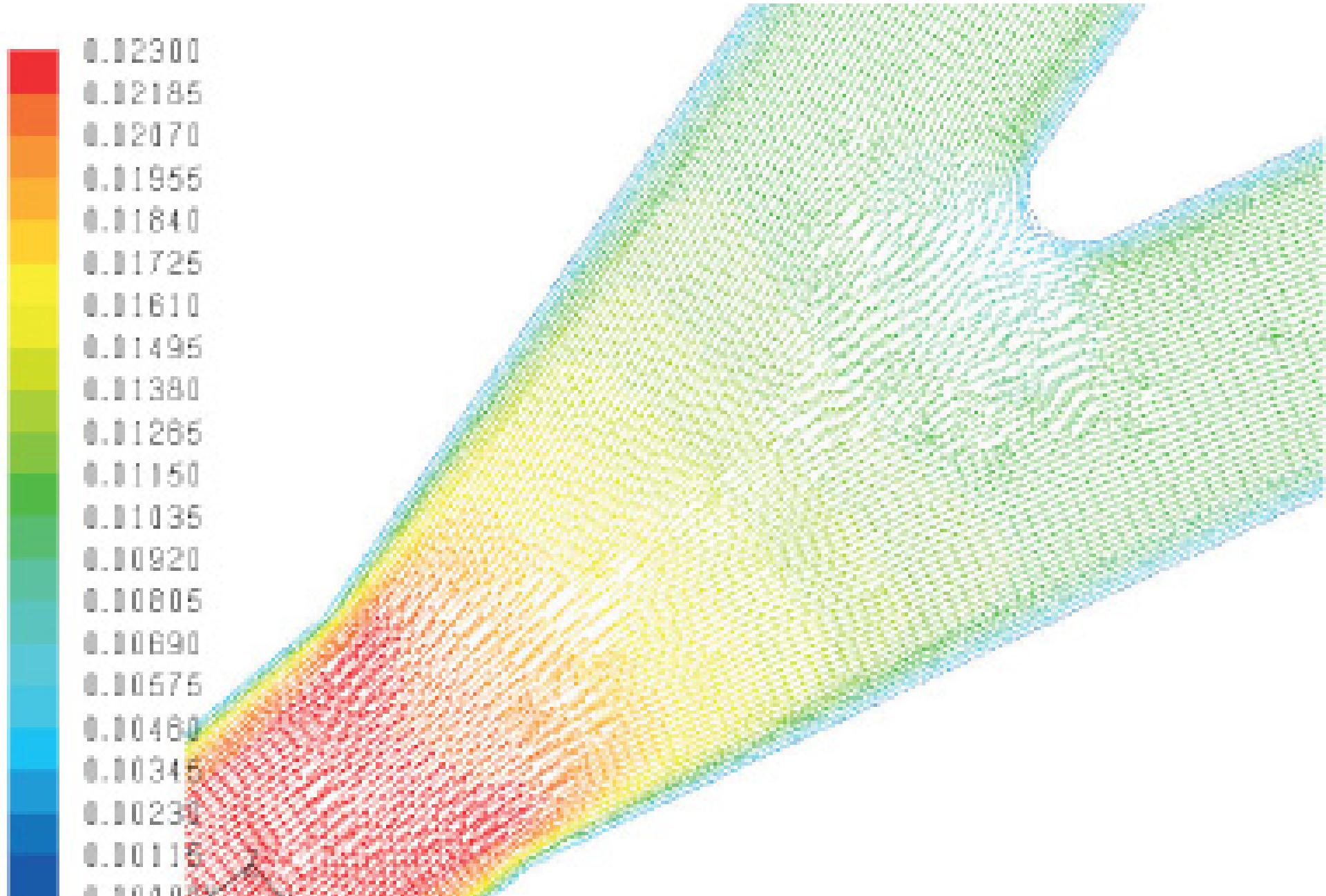
Theoretical yield for the combustion of octane



Determine the theoretical yield for the combustion of octane if 1 liter of octane fuel is mixed with 1420 liters of O_2. Please first balance the chemical equation. [The density of octane is 0.7 gm/cm^3]

$$C_8H_{18}(\ell) + O_2(g) \rightarrow CO_2(g) + H_2O\ (\ell)$$