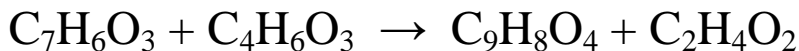


Aspirin ( $\text{C}_9\text{H}_8\text{O}_4$ ), can be made in the reaction below.



(Formula masses:  $\text{C}_7\text{H}_6\text{O}_3 = 138$

$\text{C}_4\text{H}_6\text{O}_3 = 102$      $\text{C}_9\text{H}_8\text{O}_4 = 180$      $\text{C}_2\text{H}_4\text{O}_2 = 60$ )

Use the equation below to calculate the atom economy for the production of aspirin.

Atom economy =

$$\frac{\text{mass of required product}}{\text{total mass of products}} \times 100\%$$