The equation for reaction between citric acid and sodium bicarbonate is next:

$$3NaHCO_3 + C_6H_8O_7 \rightarrow C_6H_5Na_3O_7 + 3CO_2 + 3H_2O$$



One of the products of this process is CO_2 gas (it will leave the reaction mixture), the rest will be in solution. $C_6H_5Na_3O_7$ is soluble salt and H_2O is liquid.

The equation for reaction between vinegar (acetic acid) and sodium bicarbonate is similar:

 $CH_3COOH + NaHCO_3 \rightarrow CH_3COONa + H_2O + CO_2$

The condition of products is the same.