

Determination of sodium benzoate in fruit juice

Method:

1. Transfer 10 ml of juice sample into a beaker and add 1 ml of 10% NaOH solution and 12 g NaCl and mix the mixture
2. Add sufficient water to bring the vol. up to about 50 ml using volumetric flask and let it stand for 30 min. with frequent shaking
3. Add 1 drop of ph.ph (the color will change to pink), add drops of HCl until the color change (disappear), then add excess 3 ml HCl
4. Add 25 ml of chloroform and transfer into separator funnel
5. The separating funnel should be shaken vigorously for 15 min, while shaking open the cover from time to time to release any pressure within the funnel. *Be sure funnel is pointing away from you before opening*
6. The solutions then allowed to separate for 10 min at room temperature
7. Transfer 12.5 ml of the chloroform layer (lower layer) into a conical flask and evaporate of the chloroform on a hot plate
8. Add 50 ml of 50% ethanol solution
9. Add 2 drops of ph.ph as indicator and titrate with 0.05 M NaOH
10. Calculate the amount of sodium benzoate in the sample

Results and calculations:

1 ml of 0.05M NaOH → 0.0072g of sodium benzoate

..... ml of NaOH → ? gm of sodium benzoate

% of sodium benzoate = (wt. of sodium benzoate / wt. of sample) X 100

- Normal range = not exceed 0.13 %

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