Letters

Analysis of Phosphoric Acid Content in Popular Carbonated Drinks

The article entitled "Determination of Phosphorus in Cola Drinks" *(1)* indicates that the color of cola beverages interferes in the colorimetric determination of phosphoric acid. The article suggests that only clear colas can be analyzed. We have determined that colored soft drinks absorb below 650 nm whereas the absorbance measurement for the analysis of phosphoric acid is made at 830 nm. By studying a number of soft drinks with color but with or without phosphoric acid, we have determined that the required 20-fold dilution is not to dilute the color but merely to place the sample within the calibration range of the analysis. For example, root beer, which does not contain phosphoric acid but is highly colored, had no significant absorbance following the experimental procedure. We altered the procedure such that the final volume was 50 mL rather than 5 mL. This was done so that the addition of deionized water to the volumetric flask was added to the line, the preferred method, rather than by adding a set amount of deionized water, where the total volume equals the desired amount. Lastly, in some cases, 24 hours was not sufficient time to degas the carbonated beverages. We have found that sonicating the samples for 15 minutes accomplishes this task. This work was presented at the 56th Southeast Regional Meeting of the ACS *(2)*.

Literature Cited

1. Lozano-Calero, D.; Martìn-Palomeque, P.; Madueño-Lorguillo, S. *J. Chem. Educ.* **1996**, *73*, 1173–1174.
2. Rodgers, J.; Koether, M. Analysis of Phosphoric Acid Content in Popular Carbonated Drinks. Presented at 56th Southeast Regional Meeting of the ACS, Research Triangle Park, November 10–13, 2004; Undergraduate Posters II # 839.

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