



February 20, 2013

CASE STUDY: Pomegranate Juice Adulteration Definitively Identified with PerkinElmer DSA and TOF MS Instrumentation

Summary: A Beverage Industry Challenge – As a result of the surge in the popularity of pomegranate juice there has been an increase in economic fraud to lessen the cost and improve the bitterness of the juice. Sometimes lower-cost juices, like apple and grape, are added, but not mentioned on the product label, and the product is sold at the price of pure pomegranate juice (\$30 - 60 per gallon) without some of the retailers' or processors' knowledge.

A Solution-Oriented Approach – PerkinElmer developed the [AxION™ Direct Sample Analysis \(DSA\)](#) system integrated to the [AxION 2 Time of Flight Mass Spectrometer \(TOF MS\)](#), which is designed and suited for the direct sample introduction and detection of adulterant juices in seconds without sample preparation or method development. As a result, users can employ this easily operated and interpreted system to speed up pomegranate juice analysis time to mere seconds and test for adulteration – all without the need to understand the fundamental chemistry. This solution confirms if a sample is in fact adulterated or not by analyzing for marker acids. To understand the extent to which the pomegranate juice has been adulterated, an additional analysis using [UV/Vis spectroscopy](#) can measure the concentration of pomegranate or other antioxidant-containing fruit juices present in the sample.

Click [here](#) to access the full case study.

Interviews: To schedule an interview with a PerkinElmer expert on how to quickly and efficiently detect this adulteration using the method developed leveraging the AxION Direct Sample Analysis system, please contact Brittney Haynes at Brittney.Haynes@edelman.com or (404) 460-9664.

Image: A high-resolution image of the PerkinElmer AxION Time-of-Flight Mass Spectrometer and Direct Sample Analysis system is available [here](#).

About PerkinElmer: PerkinElmer, Inc. is a global leader focused on improving the health and safety of people and the environment. The company reported revenue of approximately \$1.9 billion in 2011, has about 7,400 employees serving customers in more than 150 countries, and is a component of the S&P 500 Index. Additional information is available through 1-877-PKI-NYSE, or at www.perkinelmer.com.

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