May 19, 2014

**Office of Water Quality Water-Quality Information Note 2014.09**

**Subject: Field Methods – Procedure for Syringe-tip Filtration of Samples for Analysis of Pesticides and Pharmaceuticals by Direct Aqueous Injection (DAI) LC-MS/MS now posted to Office of Water Quality intranet page**

This information note announces that the syringe-filter procedure for processing samples for analysis by DAI LC-MS/MS has been posted on the internal home page of the Office of Water Quality (OWQ) under "Field & Project Resources" and can be accessed at http://water.usgs.gov/usgs/owq/NFM5_DAIsection_2014-05-19.pdf for field-immediate use by USGS personnel. This field guidance is accessible only from the OWQ intranet site, until it can be published in Chapter A5 of the *National Field Manual for the Collection of Water- Quality Data* (NFM).

The posted guidance describes syringe-filter sample collection and processing procedures that are associated with a new Direct Aqueous Injection (DAI) high-performance liquid chromatograph/tandem mass spectrometry (DAI LC-MS/MS or DAI-HPLC/MS/MS) analytical method. The DAI method was developed specifically by the National Water Quality Laboratory (NWQL) for analytical schedules 2437 (pesticides by DAI) and 2440 (pharmaceuticals-II). The approval notification for the DAI LC-MS/MS method was distributed via e-mail by Donna N. Myers, Chief, OWQ, on April 17, 2014 and announced by the NWQL in Rapi-Note 14-10.

The field filtration techniques provided in this document were developed by Mark Sandstrom and Michael Manning from procedures tested by the National Water Quality Assessment Program on thousands of surface-water and groundwater samples collected during 2012 and 2013. The equipment required for syringe-tip filtration is described in NFM Chapter A2 version 3.1, under section 2.2.3.B (page 49), and should be obtained from the NWQL National Field Supply Service (NFSS).

This protocol was prepared as an addition to section 5.2.2 of NFM Chapter A5 and has been colleague reviewed and revised as of the issue of this WaQI Note. After Bureau approval, it will be posted to the NFM Web site for Chapter 5 and removed from the OWQ intranet Web site.

*Technical questions pertaining to the DAI laboratory method should be directed to Mark Sandstrom (sandstro@usgs.gov; 303-236-3943).*

References cited:

Rapi-Note 14-10, New method available to determine 110 human-use pharmaceuticals and related compounds in filtered water by direct aqueous injection–high-performance liquid chromatography/tandem mass spectrometry (DAI–HPLC/MS/MS)

Wilde, F.D., Sandstrom, M.W., and Skrobialowski, S.C., 2014, Selection of equipment for water sampling (ver. 3.1): U.S. Geological Survey Techniques of Water-Resources Investigations, book 9, chap. A2, April 2014, accessed May 8, 2014, at http://water.usgs.gov/owq/FieldManual/Chapter2/Ch2_contents.html

*WaQI Notes are archived on the Office of Water Quality web site, http://water.usgs.gov/usgs/owq/WaQI/index.html*

Signed,

The Office of Water Quality 5/19/14

Distribution: All WMA Employees