



Stephen R Peck

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To: Ronald V Crosman/CL/DuPont@DuPont
cc: John E Crum/SE/DuPont@DuPont, Ta-Wei Fu/SE/DuPont@DuPont,
Leo M Lech/DuPont@DuPont, Thomas W
Mahlberg/SE/DuPont@DuPont, Mark E Reeder/SE/DuPont@DuPont
Subject: Eureka!

Ron,

As we discussed, treatment of the acidic waste sample for the APFO determination by GC test gave a pink-violet hexane extract consistent with iodine.

After discussing the observation with Leo Lech, the colored impurity is most likely I_2^- . (Thanks, Leo!)

The good news is the color is pH dependent. Neutralization of the sample with NaOH removed the color.

The better news is that the neutralized species can be analyzed by HPLC. No APFO was found.

The (current) best news is that HPLC analysis of the neutralized sample spiked with APFO was able to detect the APFO.

Separation from the early-eluting (ionic) species was excellent.

Pathforward is to prepare some APFO-spiked acid to use as standards, then determine best neutralization procedure.

Bottom line: a usable method appears imminent.

Regards,

Steve

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