

 Ta-Wei Fu

11/12/02 02:13 PM

To: Charles J Noelke/AE/DuPont@DuPont
cc: Steven H Swearingen/AE/DuPont@DuPont
Subject: Eureka!

Charlie,

Steve has been working on two samples from Fayetteville in the past few days. He just called me a few minutes ago to report on this initial finding in the attached note. He is quite excited about it.

He will check with Ron for NMR results on these two samples for reference.

Ta-Wei

----- Forwarded by Ta-Wei Fu/SE/DuPont on 11/12/2002 05:08 PM -----

Stephen R Peck


 11/12/2002 05:08 PM

To: Ronald V Crosmun/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_3^- . (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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