Template Provided By:
Cancer Imaging Program
National Cancer Institute

Preparation of FES Standard Solution and Dilutions Form

(Refer to GEN-Q319)

STDFES-_____ SS-FES-_____ Expiration Date: _____
(if using old FES stock solution, enter the STDFES- batch number above).

Date of Standard/ Dilution Preparation: _____ Lot ETH50-_____ used

Preparation of FES Stock Solution (if applicable on this date)**:**
Weigh a piece of weighing paper _____ **g** (**A**)
Calculate the desired weight of FES = 0.010 g + A **:_____ g**
Weigh out 0.010 g (10 mg) of FES: weight of paper and FES**_____ g** (B)
Add the FES to a clean dry 10 mL volumetric flask.
Reweigh the paper (after adding FES to flask) **_____ g** (**C**)
Weight of FES added to flask **_____ mg** (=(**B minus C**) times 1000)
Add(**ETH50–L**) preparative mobile phase to the volumetric flask until it is ~ ½ full. Swirl to dissolve the FES. Then fill the volumetric to its 10 mL mark with the ETH50 solution. Fully mix the solution, **____(initials)**
Final concentration of FES stock solution, **_____ mg/mL** Label the bottle or final container with the following: **STDFES-_____ (stock solution)**
_____mg/mL Expiration _____.
Date prepared: _____ Made by: _____ .
Stock solution expires 1 year after preparation if stored in the freezer in a tightly capped cryogenic vial. Fully defrost stock solution and mix before making dilutions.

Suggested Dilutions of FES Stock Solution for Analytical HPLC

FES Solution	Dilution	FES Solution to Use	mL of FES to add	mL of ETH50 to add	Approximate Concentration (µg/mL)	Real Concentration (µg/mL)
Stock	**none**	**N/A**	from above	from above	1,000	
A	**1/10**	**Stock**	(0.50)	(4.5)	100.0	
B	**1/100**	**A**	(0.50)	(4.5)	10.0	
C	**1/1,000**	**B**	(0.50)	(4.5)	1.0	
D	**1/2,000**	**C**	(2.5)	(2.5)	0.5	
E	**1/4,000**	**D**	(2.5)	(2.5)	0.25	
F	**1/8,000**	**E**	(2.5)	(2.5)	0.125	
G	**1/16,000**	**F**	(2.5)	(2.5)	0.0625	

Label each Vial of FES Diluted Solution Standards with "FES solution" the final concentration, volume, date prepared, date expires, initials. The diluted FES standards are good for 1 month when stored at room temperature or in the refrigerator.

Prepared By: _____Date: _____
Signature

QC Review: _____Date: _____
Signature

Author:_____Date:_____

Regulatory Approval:_____Date:_____

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