Template Provided By:

Cancer Imaging Program

National Cancer Institute

Preparation of FMISO Standard Solution and Dilutions Form

(Refer to GEN-Q219)

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

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

Preparation of FMISO Stock Solution (if applicable on this date)**:**
Weigh a piece of weighing paper _____ **g** (**A**)
Calculate the desired weight of FMISO = 0.025 g + A**: _____ g**
Weigh out 0.025 g (25 mg) of FMISO: weight of paper and FMISO**_____ g (B)**
Add the FMISO to a clean dry 25 mL volumetric flask.
Reweigh the paper (after adding FMISO to flask) **_____ g** (**C**)
Weight of FMISO added to flask **_____ mg** (=(**B minus C**) times 1000
Add 95% 1 mM Formate: 5% Methanol (**HFM–L**) analytical mobile phase to the volumetric flask until it is ~ ½ full. Swirl to dissolve the FMISO. Then fill the volumetric to its 25 mL mark with the HFM solution. Fully mix the solution, **____(initials)**
Final concentration of FMISO stock solution, **_____ mg/mL** Label the bottle or final container with the following: **STDFMISO_____ (stock solution)**
__mg/mL Expiration _____.
Date prepared: _____ Made by: _____ .
Stock solution expires 6 months 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 FMISO Stock Solution for Analytical HPLC

FMISO Solution	Dilution	FMISO Solution to Use	mL of FMISO to add	mL of HFM to add	Approximate Concentration (µg/mL)	Actual Concentration (µg/mL)
Stock	**none**	**N/A**	from above	from above	1,000	
A	**1/10**	**Stock**	(0.50)	(4.5)	100.0	
B	**1/20**	**A**	(2.5)	(2.5)	50.0	
C	**1/40**	**B**	(2.5)	(2.5)	25.0	
D	**1/80**	**C**	(2.5)	(2.5)	12.5	
E	**1/160**	**D**	(2.5)	(2.5)	6.25	
F	**1/320**	**E**	(2.5)	(2.5)	3.12	
G	**1/640**	**F**	(2.5)	(2.5)	1.56	

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

Prepared By: _____Date: _____
Signature
QC Review: _____Date: _____
Signature

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