

ISIS Deuteration Facility

Product List

March 2026

Listed below is a representative selection of materials that can be provided by the ISIS Deuteration facility for neutron experiments. This list is not finite and if a compound you require is not listed below, please contact us on ISISDeuterationFacility@stfc.ac.uk and we will be happy to discuss your requirements.

All the deuterated compounds produced by the deuteration facility will be analysed and characterised by the facility. This includes multinuclear NMR spectroscopy (^1H , ^2H , ^{13}C and others where necessary) to confirm purity and to calculate the deuteration level. In addition, mass spectrometry (MS, GCMS or LCMS) will be used to calculate overall deuteration level of the product and purity.

Average synthesis times are given as a guide and does not guarantee the material will be available to you within this timeframe. Material in stock can be provided earlier.

Contents

1. Carboxylic Acids, alcohol, amines and alkyl halides	2
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3. Ionic compound/surfactants.....	10
4. Carbonates and Esters	11
5. Miscellaneous	12

1. Carboxylic Acids, Alcohol, Amines and Alkyl Halides

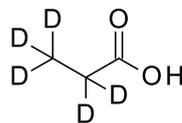
**Compound Names/
Synonyms**

Chemical Structure

**Synthesis
Time**

Propanoic acid d₅

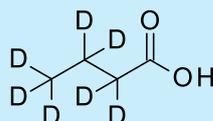
C3 Acid



1 Month

Butanoic acid d₇

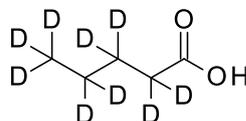
C4 Acid



1 Month

Pentanoic acid d₉

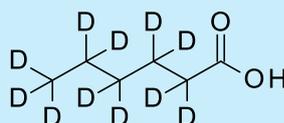
C5 Acid



1 Month

Hexanoic acid d₁₁

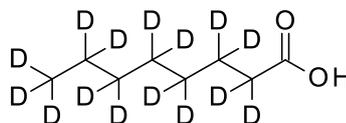
C6 Acid



1 Month

Octanoic acid d₁₅

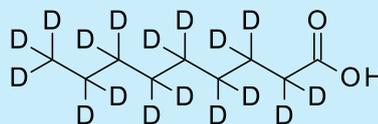
C8 Acid



1 Month

Nonanoic acid d₁₇

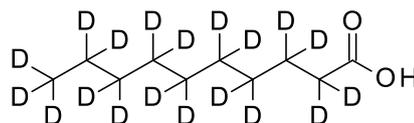
C9 Acid



1 Month

Decanoic acid d₁₉

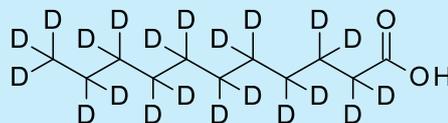
C10 Acid



1 Month

Undecanoic acid d₂₁

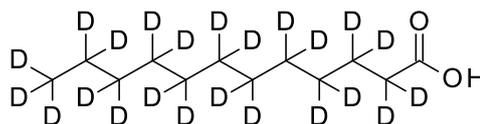
C11 Acid



1 Month

Dodecanoic acid d₂₃

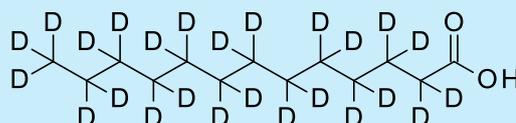
C12 Acid



1 Month

Tridecanoic acid d₂₅

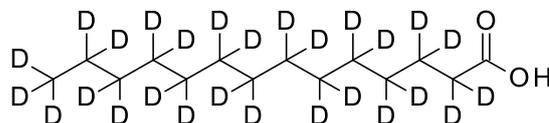
C13 Acid



1 Month

Tetradecanoic acid d₂₇

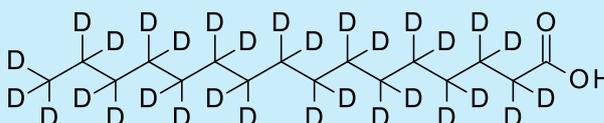
C14 Acid



1 Month

Hexadecanoic acid d₃₁

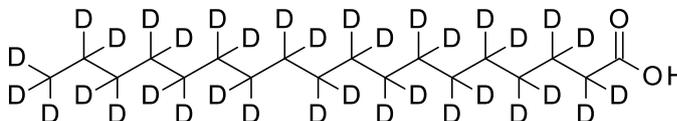
C16 Acid



1 Month

Octadecanoic acid d₃₅

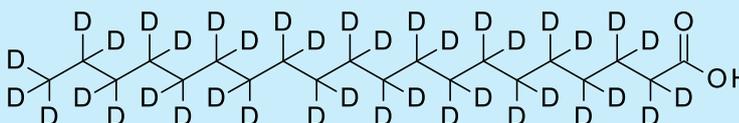
C18 Acid



1 Month

Icosanoic acid d₃₉

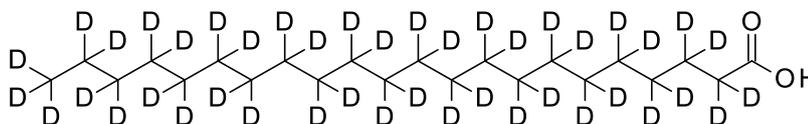
C20 Acid



1 Month

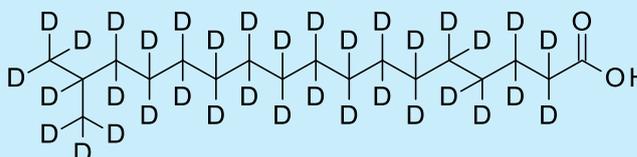
Docosanoic acid d₄₃

C22 Acid



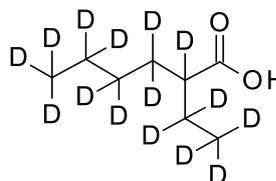
1 Month

Isostearic acid d₃₅



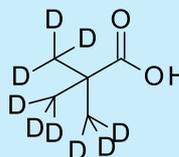
1 Month

2-Ethylhexanoic acid d₁₅



1 Month

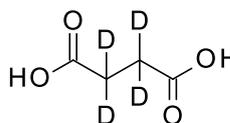
Pivalic acid d₉



1 Month

Butanedioic acid d₄

C4 Diacid



1 Month

Pentanedioic acid d₆

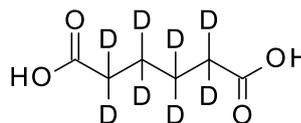
C5 Diacid



1 Month

Hexanedioic acid d₈

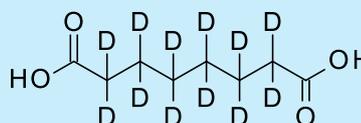
C6 Diacid



1 Month

Octanedioic acid d₁₂

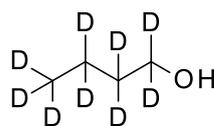
C8 Diacid



1 Month

1-Butanol d₉

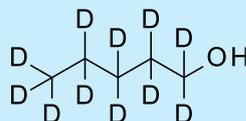
C₄ OH



6 Weeks

1-Pentanol d₁₁

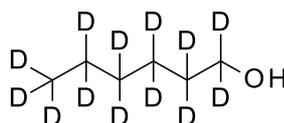
C₅ OH



6 Weeks

1-Hexanol d₁₃

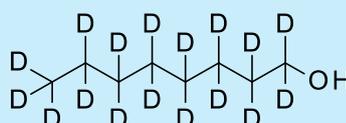
C₆ OH



6 Weeks

1-Octanol d₁₇

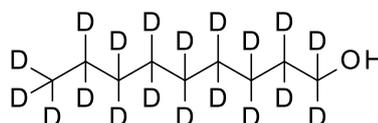
C₈ OH



6 Weeks

1-Nonanol d₁₉

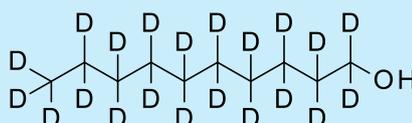
C₉ OH



6 Weeks

1-Decanol d₂₁

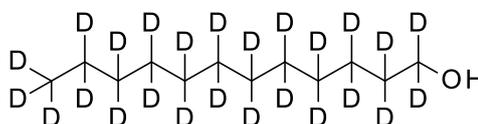
C₁₀ OH



6 Weeks

1-Dodecanol d₂₅

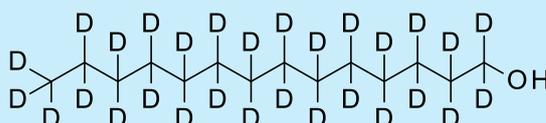
C₁₂ OH



6 Weeks

1-Tetradecanol d₂₉

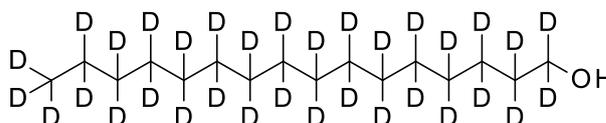
C₁₄ OH



6 Weeks

1-Heptadecanol d₃₃

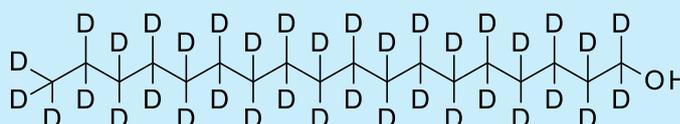
C₁₆ OH



6 Weeks

1-Octadecanol d₃₇

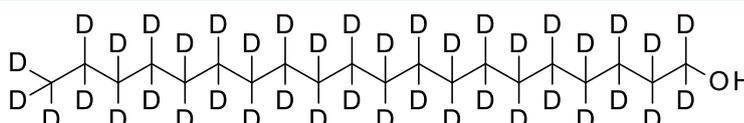
C₁₈ OH



6 Weeks

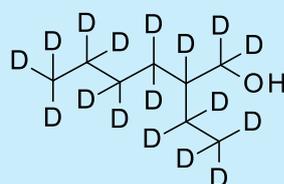
1-Eicosanol d₄₁

C₂₀ OH



6 Weeks

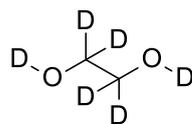
2-Ethylhexanol d₁₅



6 Weeks

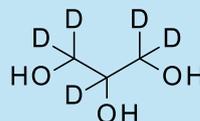
Ethylene Glycol d_6

(selective deuteration available)



1 Month

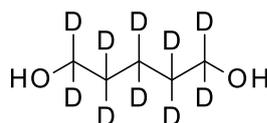
Glycerol d_5



1 Month

1,5-Pentanediol d_{10}

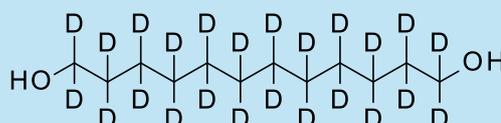
C5 Diol



6 Weeks

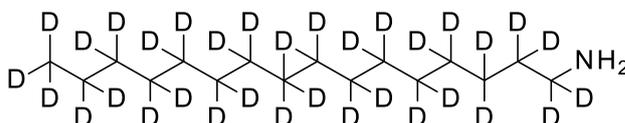
1,12-Dodecanediol d_{24}

C12 Diol



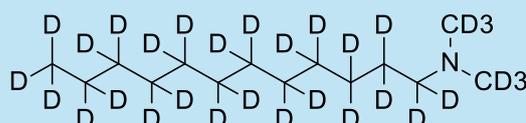
6 Weeks

1-Hexadecanamine d_{33}



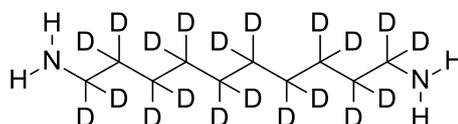
3 Months

N,N-Dimethyl-dodecylamine d_{31}



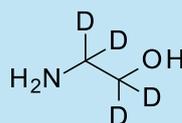
3 Months

1,10-Decane diamine d_{20}



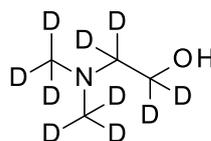
3 Months

Ethanolamine d_4



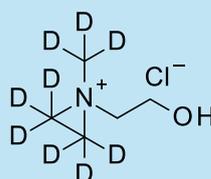
1 Month

N,N-Dimethylethanolamine d_{10}



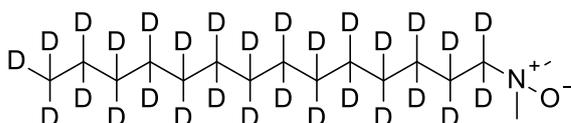
2 Months

Choline Chloride d_9



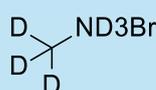
1 Month

Tetradecyldimethylamine oxide d_{29}



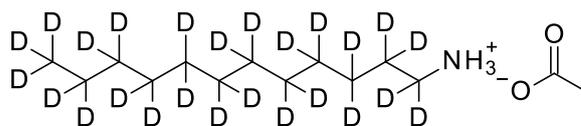
3 Months

Methylamine Hydrobromide d_6



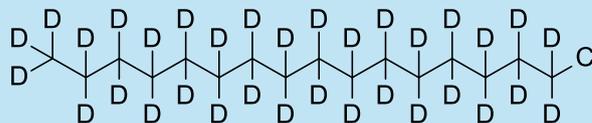
1 Month

Dodecylamine acetate salt d₂₅



3 Months

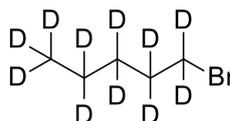
1-Chlorohexadecane d₃₃



2 Months

C16 Cl

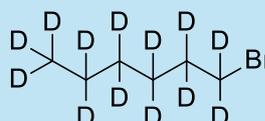
1-Bromopentane d₁₁



2 Months

C5 Br

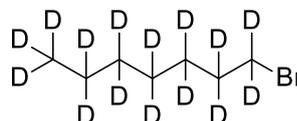
1-Bromohexane d₁₃



2 Months

C6 Br

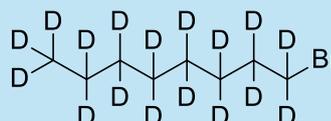
1-Bromoheptane d₁₅



2 Months

C7 Br

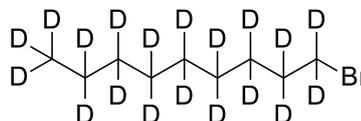
1-Bromooctane d₁₇



2 Months

C8 Br

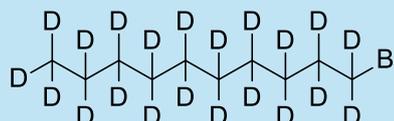
1-Bromononane d₁₉



2 Months

C9 Br

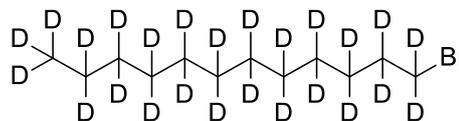
1-Bromodecane d₂₁



2 Months

C10 Br

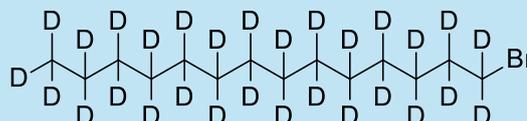
1-Bromododecane d₂₅



2 Months

C12 Br

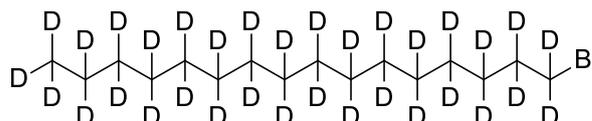
1-Bromotetradecane d₂₉



2 Months

C14 Br

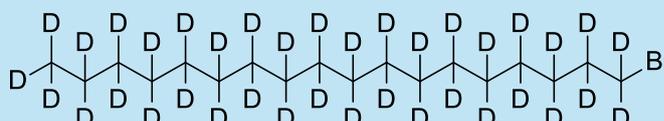
1-Bromohexadecane d₃₃



2 Months

C16 Br

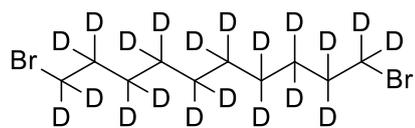
1-Bromooctadecane d₃₇



2 Months

C18 Br

1,10-Dibromodecane d_{20}



2 Months

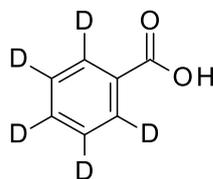
2. Aromatic Compounds

Compound Names/
Synonyms

Chemical Structure

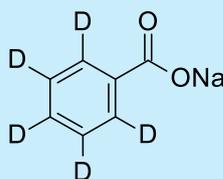
Synthesis
Time

Benzoic acid d_5



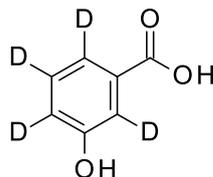
1 Month

Sodium benzoate d_5



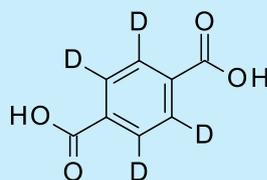
1 Month

3-Hydroxybenzoic acid d_4



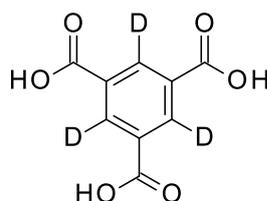
1 Month

Terephthalic acid d_4



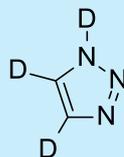
6 Weeks

Trimesic acid d_3



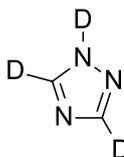
6 Weeks

1,2,3-Triazole d_3



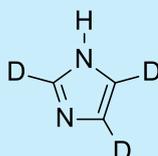
1 Month

1,2,4-Triazole d_3



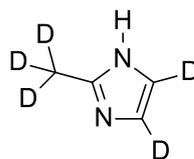
1 Month

Imidazole d_3



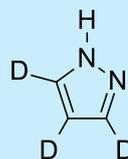
1 Month

2-Methylimidazole d₅



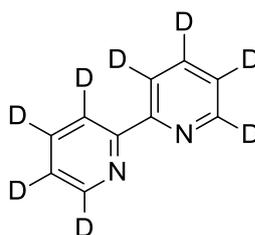
6 Weeks

Pyrazole d₃



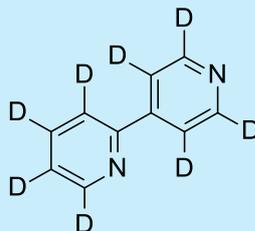
1 Month

2,2-Bipyridine d₈



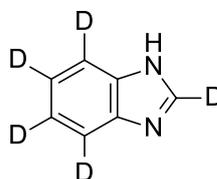
3 Months

2,4-Bipyridine d₈



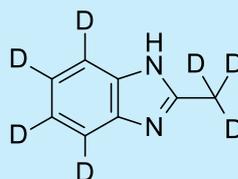
3 Months

Benzimidazole d₅



4 Months

2-Methylbenzimidazole d₇



4 Months

3. Ionic Compound and Surfactants

**Compound Names/
Synonyms**

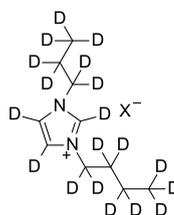
Chemical Structure

**Synthesis
Time**

Imidazole based

Ionic Liquids

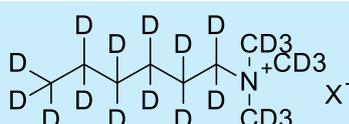
(Various chain lengths, counterions and selective deuteration are available)



3 Months

Trimethylammonium based Surfactants

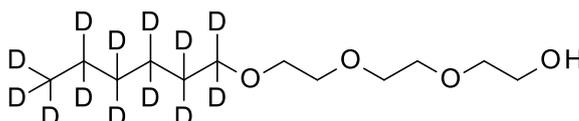
(Various chain lengths, counterions and selective deuteration are available)



3 Months

PEG based Surfactants

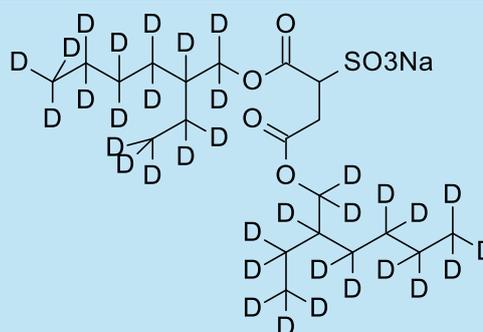
(Various chain and PEG lengths are available however the PEG is currently offered protiated)



4 Months

Diocyl sodium sulfosuccinate d_{34}

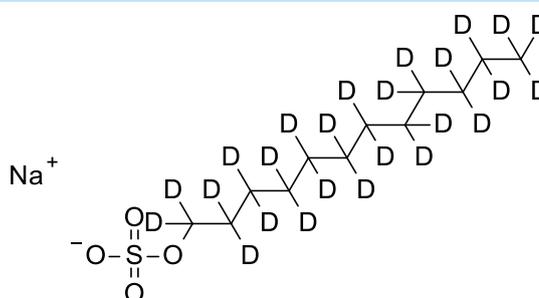
AOT d_{34}



3 Months

Sodium dodecyl sulfate d_{25}

SDS d_{25}



2 Months

4. Carbonates and Esters

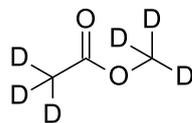
**Compound Names/
Synonyms**

Chemical Structure

**Synthesis
Time**

Methyl acetate d₆

(selective deuteration available)



6 Weeks

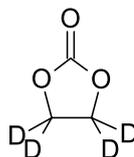
Dimethylglutarate d₁₂

(Various chain lengths and esters,
along with selective deuteration
are available)



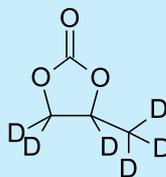
2 Months

Ethylene carbonate d₄



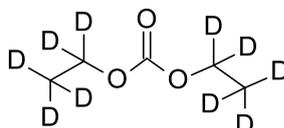
6 weeks

Propylene carbonate d₆



6 Weeks

Diethyl carbonate d₁₀



2 Months

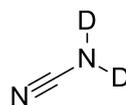
5. Miscellaneous

Compound Names/
Synonyms

Chemical Structure

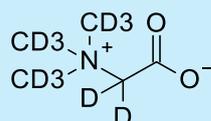
Synthesis
Time

Cyanamide d₂



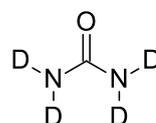
2 Months

Trimethylglycine d₁₁



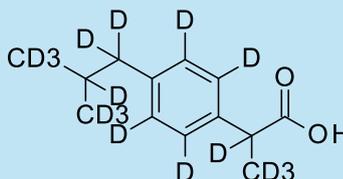
2 Months

Urea d₄



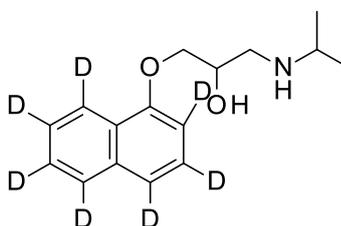
1 Month

Ibuprofen d₁₇



6 Months

Propranolol hydrochloride d₇



6 Months