



EUROPEAN
SPALLATION
SOURCE

Deuteration and Macromolecular Crystallisation Platform

Product List

January 2022

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Biological: proteins, biomass, nucleic acids

Category
<i>E. coli</i> cell paste (protein expression strains e.g. Tuner DE3, BL21 DE3)
Algal cell paste (<i>Botryococcus braunii</i>)
Yeast cell paste (<i>Pichia pastoris</i>)
Recombinant proteins with user supplied plasmid (standard strains: Tuner DE3, BL21 etc)
Deuterated plasmid DNA

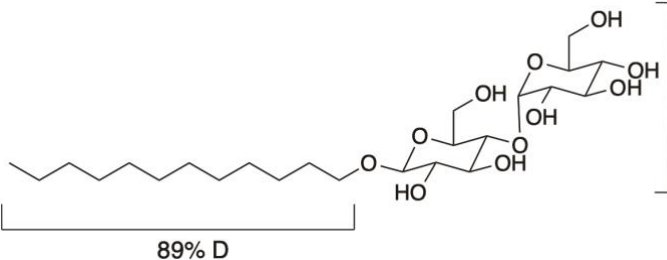
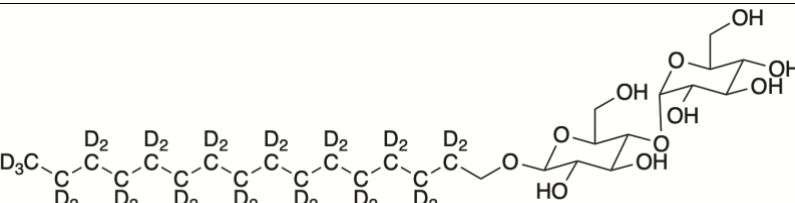
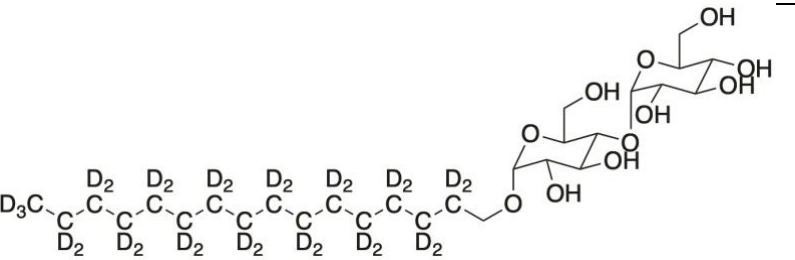
Biological: purified lipid mixtures

Category
Total lipid extract from yeast (<i>Pichia pastoris</i>)
Total phospholipid extract (<i>Pichia pastoris</i>)
Feasibility tests for the purification of specific yeast lipid classes (e.g. PC, PE, cardiolipin, ergosterol) from <i>Pichia Pastoris</i>

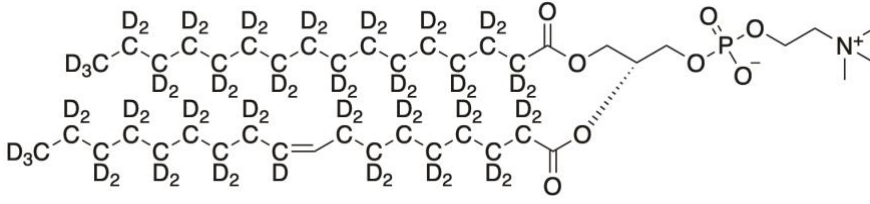
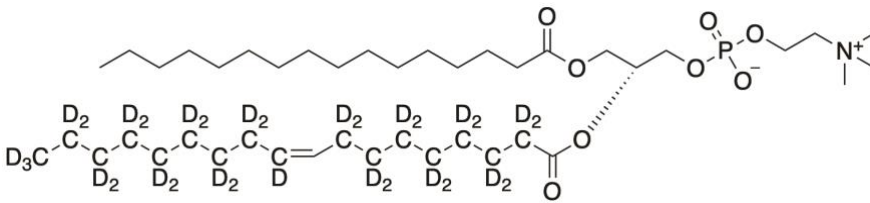
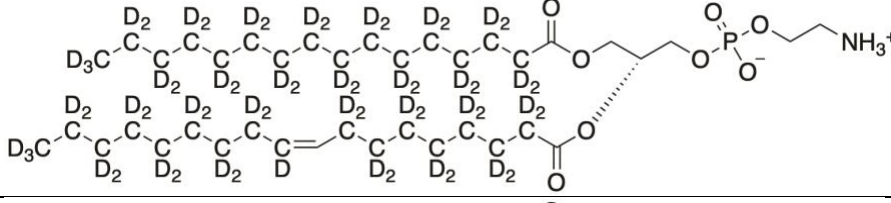
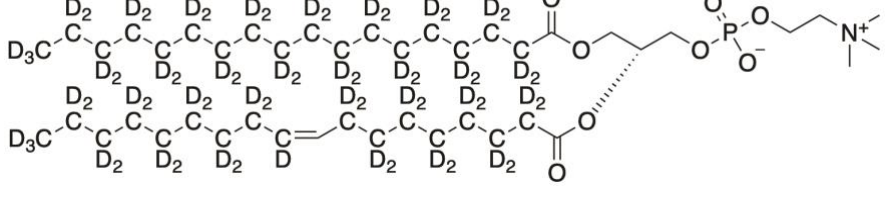
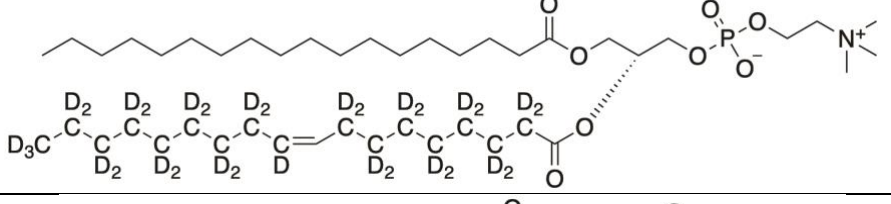
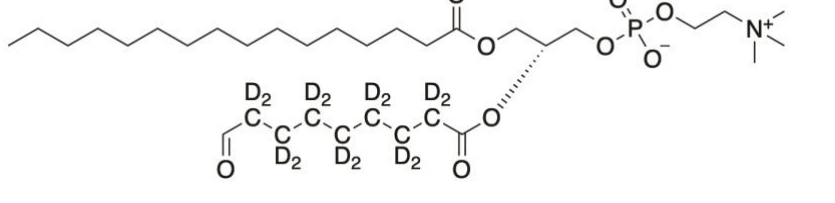
Chemical: carboxylic acids, alcohols, alkyl halides

Name	Chemical structure
Octanoic acid- d_{15}	
Nonanoic acid- d_{17}	
Decanoic acid- d_{19}	
Dodecanoic acid- d_{23}	
Hexadecanoic acid- d_{31}	
Octadecanoic acid- d_{35}	
Nonanedioic acid- d_{14}	
Oleic acid- d_{32}	
Octanol- d_{17}	
Nonanol- d_{19}	
Dodecanol- d_{25}	
Hexadecanol- d_{33}	
1-Bromooctane- d_{17}	
1-Bromononane- d_{19}	

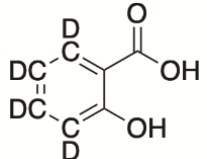
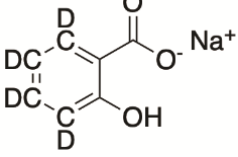
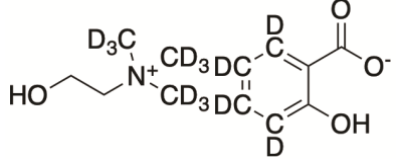
Chemical: surfactants

Name	Chemical structure
<i>n</i> -Dodecyl- β -D-maltopyranoside (alkyl chain 89% deuterated; headgroup 51% deuterated)	
<i>n</i> -Hexadecyl- β -D-maltopyranoside- d_{31}	
<i>n</i> -Hexadecyl- α -D-maltopyranoside- d_{31}	

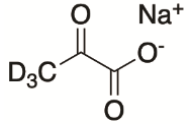
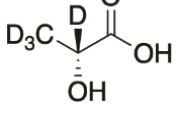
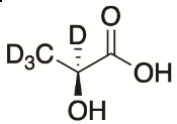
Chemical: phospholipids

Name	Chemical structure
1-Palmitoyl- <i>d</i> ₃₁ -2-oleoyl- <i>d</i> ₃₂ - <i>sn</i> -glycero-3-phosphocholine	
1-Palmitoyl-2-oleoyl- <i>d</i> ₃₂ - <i>sn</i> -glycero-3-phosphocholine	
1-Palmitoyl- <i>d</i> ₃₁ -2-oleoyl- <i>d</i> ₃₂ - <i>sn</i> -glycero-3-phosphoethanolamine	
1-Stearoyl- <i>d</i> ₃₅ -2-oleoyl- <i>d</i> ₃₂ - <i>sn</i> -glycero-3-phosphocholine	
1-Stearoyl-2-oleoyl- <i>d</i> ₃₂ - <i>sn</i> -glycero-3-phosphocholine	
1-Palmitoyl-2-(9-oxononanoyl- <i>d</i> ₁₄)- <i>sn</i> -glycero-3-phosphocholine	

Chemical: aromatic molecules

Name	Chemical structure
Salicylic acid- d_4	
Sodium salicylate- d_4	
Choline- d_9 salicylate- d_4	

Chemical: other

Name	Chemical structure
Sodium pyruvate- d_3	
D-Lactic acid- d_4	
L-Lactic acid- d_4	

Crystallisation support:

Support for large protein crystal growth of either protiated or deuterated proteins (including for testing with X-rays)