

## List of Figures

Fig. 1.1.	Diphytanylglycerol diether and variants .....	43
Fig. 1.2.	Dibiphytanylglycerol tetraether and variant cyclized structures.....	44
Fig. 2.1.	Solvent bottle with sealed-on pipet .....	82
Fig. 2.2.	Commercial evaporating unit attached to commercial heating block .....	87
Fig. 2.3.	A commercial rotary evaporator connected to a vacuum water-pump .....	89
Fig. 2.4.	A splash head accessory for rotary evaporators.....	89
Fig. 5.1.	An all-glass chromatography column with solvent reservoir .....	180
Fig. 5.2.	GLC capillary column loading device.....	229
Fig. 5.3.	Simple GLC effluent collectors .....	231
Fig. 5.4.	GLC Collectors for radioactive components .....	232
Fig. 5.5.	GLC peak retention parameters.....	234
Fig. 5.6.	Retention time vs. carbon-chain length for saturated fatty acid methyl esters .....	237
Fig. 5.7.	Parameters for measurement of GLC peak areas.....	243
Fig. 5.8.	GPC of standards and post transesterification sample.....	246
Fig. 6.1.	Kinetics of <sup>32</sup> P incorporation into phospholipids of <i>Chlorella vulgaris</i> .....	265
Fig. 6.2.	Autoradiograms of [ <sup>35</sup> S]-sulfate labeled lipids of <i>Nitzschia alba</i> .....	267
Fig. 6.3.	Autoradiogram of <i>Candida lipolytica</i> and phospholipid standards .....	269
Fig. 6.4.	Incorporation of radioactivity into components of <i>Candida lipolytica</i> .....	269
Fig. 6.5.	Autoradiogram of total lipids of soybean suspension cell cultures .....	276
Fig. 6.6.	Autoradiogram of TLC plate of <sup>32</sup> S-labeled lipids of spermatozoa.....	279
Fig. 6.7.	Gas-liquid radiochromatographic tracings of methyl esters.....	290
Fig. 7.1.	Thin-layer chromatograms of <i>S. epidermidis</i> and <i>Neurospora crassa</i> .....	293
Fig. 7.2.	Infrared spectra of some lipid classes.....	298
Fig. 7.3.	<sup>1</sup> H-NMR spectra of some neutral lipid classes.....	300
Fig. 7.4.	TLC of squalenes from <i>H. cutirubrum</i> .....	303
Fig. 7.5.	Mass spectra of some lipid classes .....	313
Fig. 7.6.	TLC of lipids of human brain and beef kidney.....	340
Fig. 7.7.	TLC of lipids of <i>Dunaliella parva</i> .....	344
Fig. 7.8.	TLC of lipids of <i>Nitzschia alba</i> .....	344
Fig. 7.9.	TLC of phospholipids of millet seed .....	345
Fig. 7.10.	TLC of phospholipids of <i>Neurospora crassa</i> .....	346
Fig. 7.11.	TLC of total lipids of <i>S. aureus</i> .....	347
Fig. 7.12.	TLC of total lipids of <i>S. epidermidis</i> .....	347
Fig. 7.13.	TLC of polar lipids from strains of halophilic Archaea .....	352
Fig. 7.14.	TLC of the total lipids of <i>Haloarcula marismortui</i> .....	353
Fig. 7.15.	TLC of total lipids from <i>Methanospirillum hungatei</i> .....	354
Fig. 7.16.	Infrared spectra of some diester and diether forms of phospholipids.....	356
Fig. 7.17.	<sup>1</sup> H-NMR spectra of various phospholipids .....	358
Fig. 7.18.	<sup>13</sup> C-NMR of PGP-Me.....	360
Fig. 7.19.	<sup>31</sup> P NMR spectra of species from bovine brain (left panel) and bovine heart.....	362
Fig. 7.20.	<sup>31</sup> P-NMR spectrum of <i>H. salinarum</i> purple membrane phospholipids.....	362
Fig. 7.21.	ES-MS Analysis of total phospholipids from human red blood cells .....	363
Fig. 7.22.	Water Soluble products of mild hydrolysis of lipids of <i>Navicula pelliculosa</i> .....	370