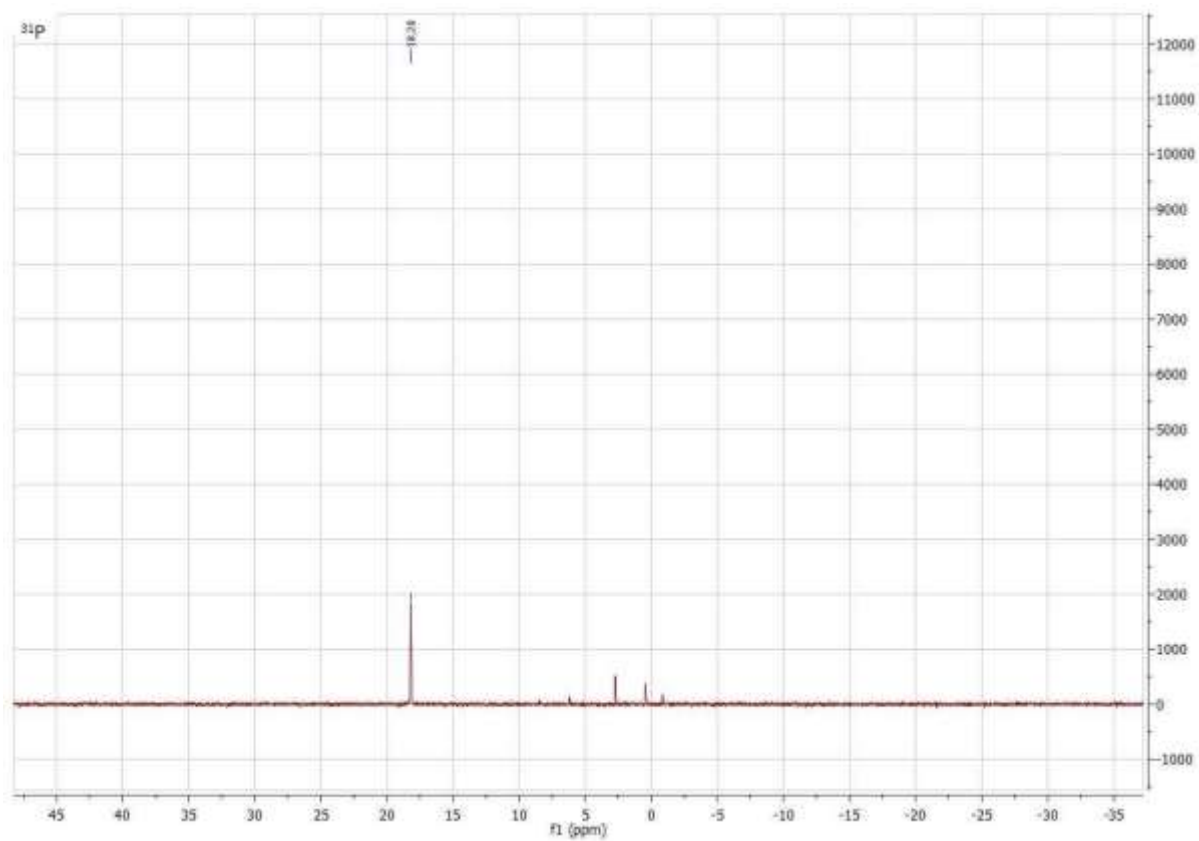
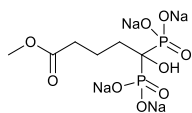
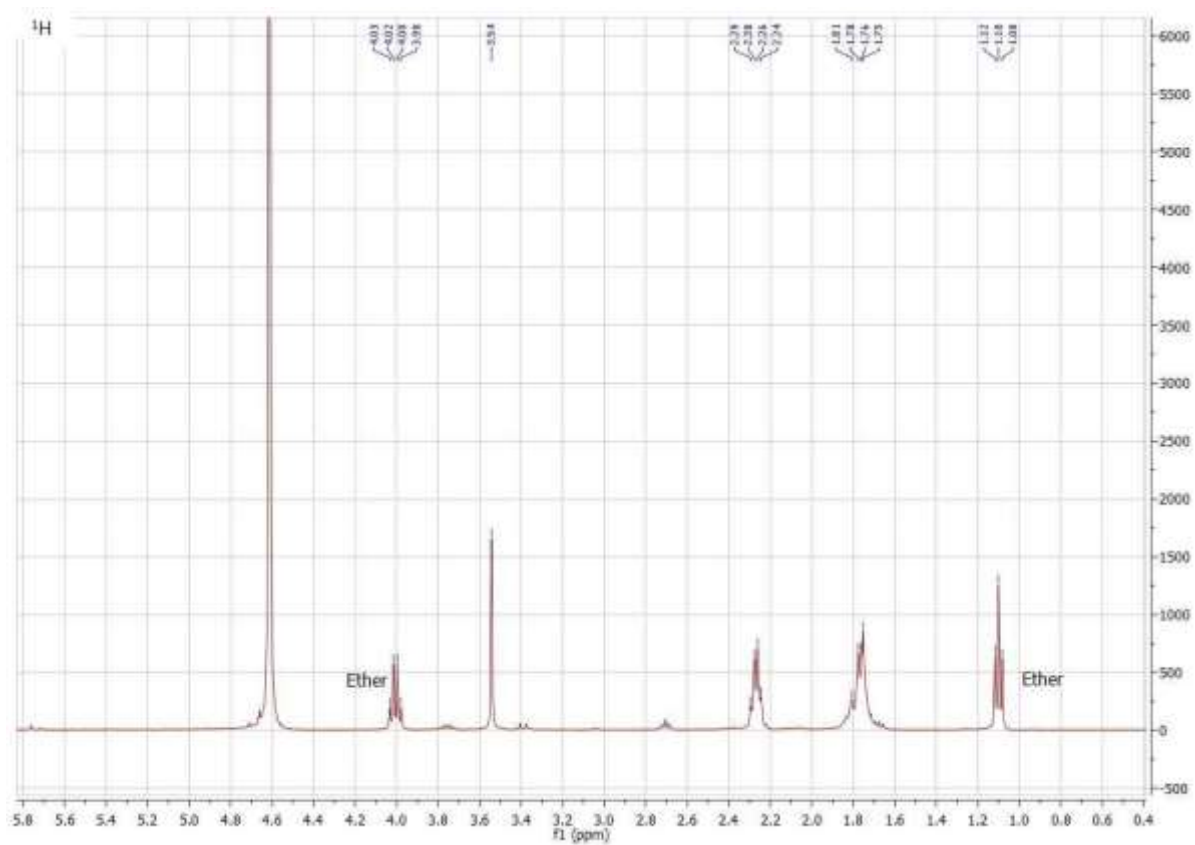


Electronic Supplementary Information

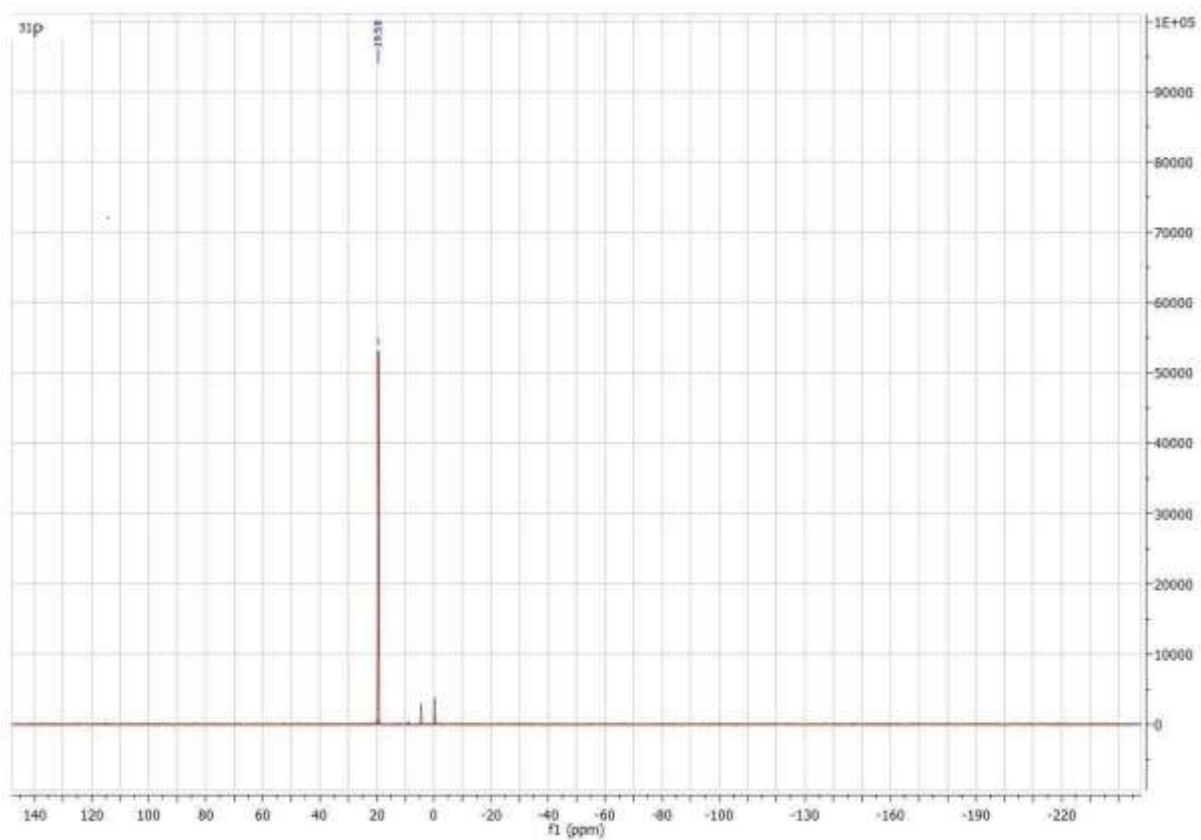
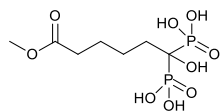
1) Synthesis of acrylic ester bisphosphonates 1a-e

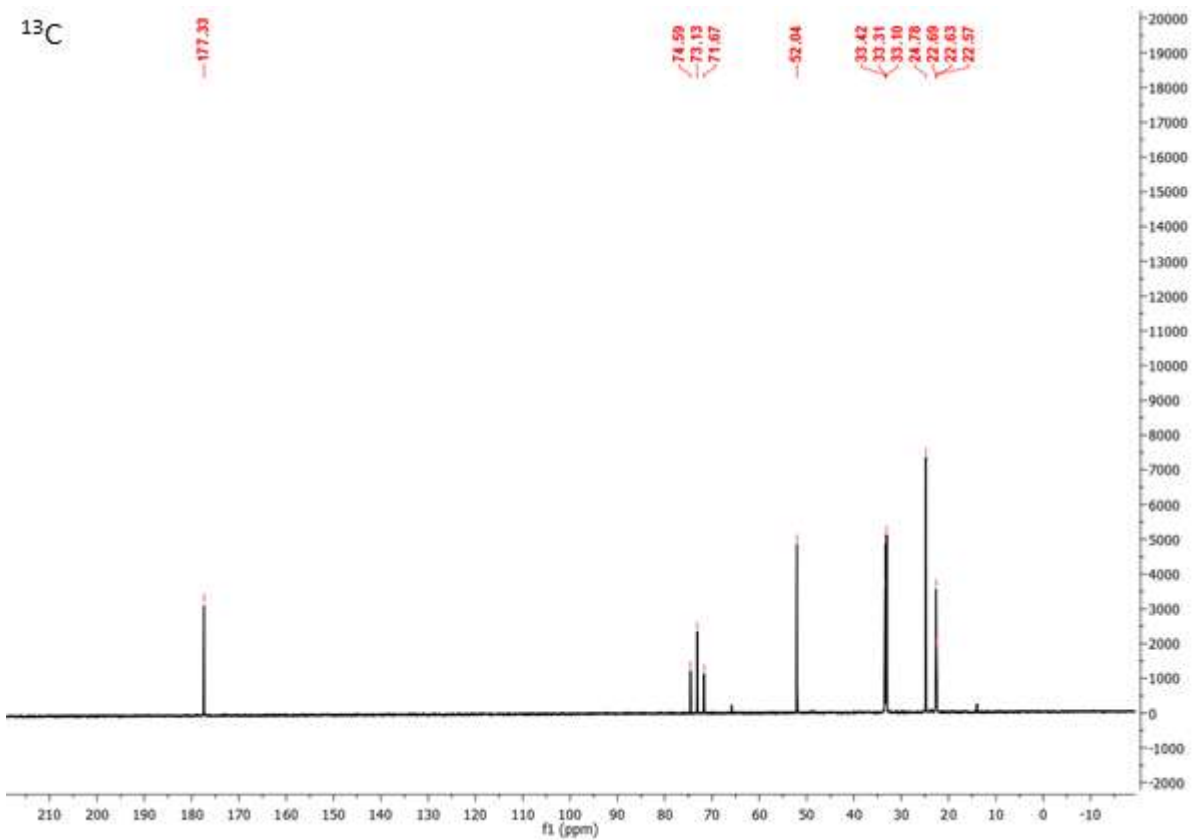
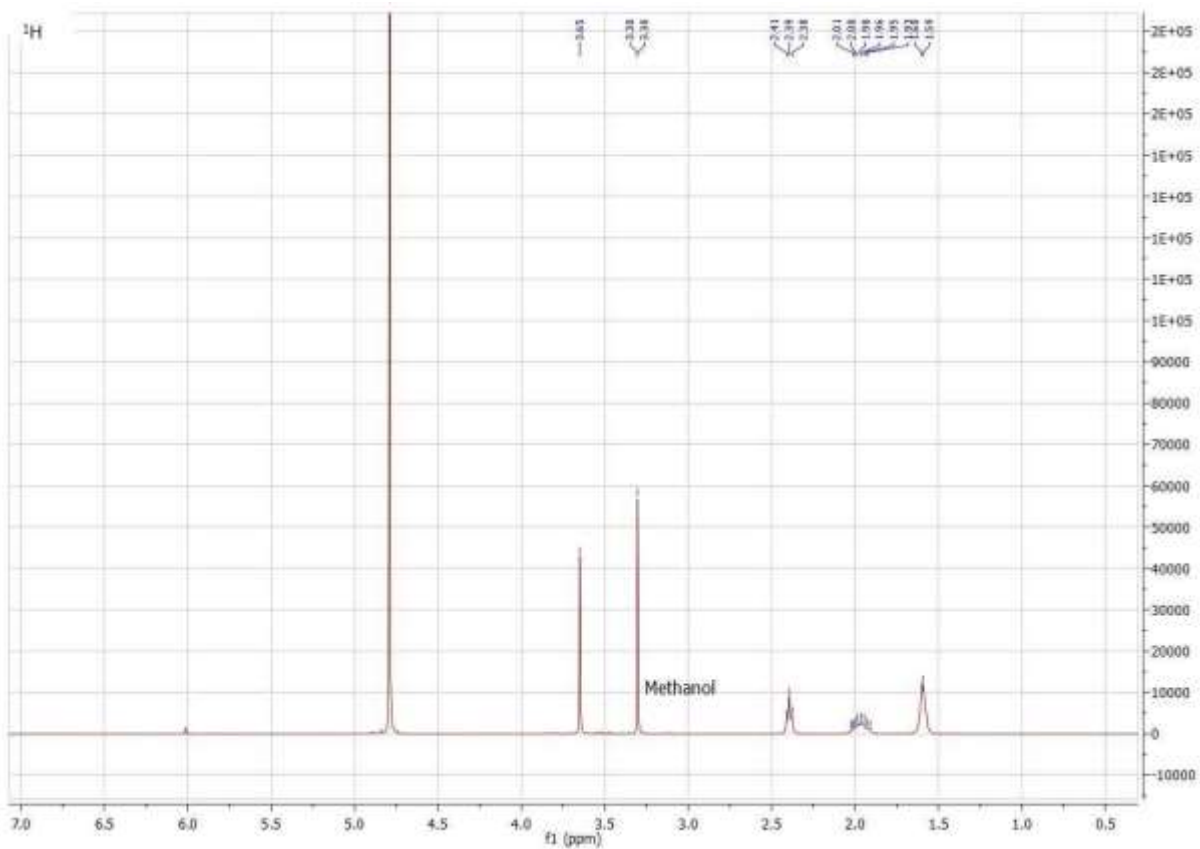
◆ Tetra sodium salt of (1-hydroxy-5-methoxy-5-oxopentane-1,1-diyl)bis(phosphonate) 2a



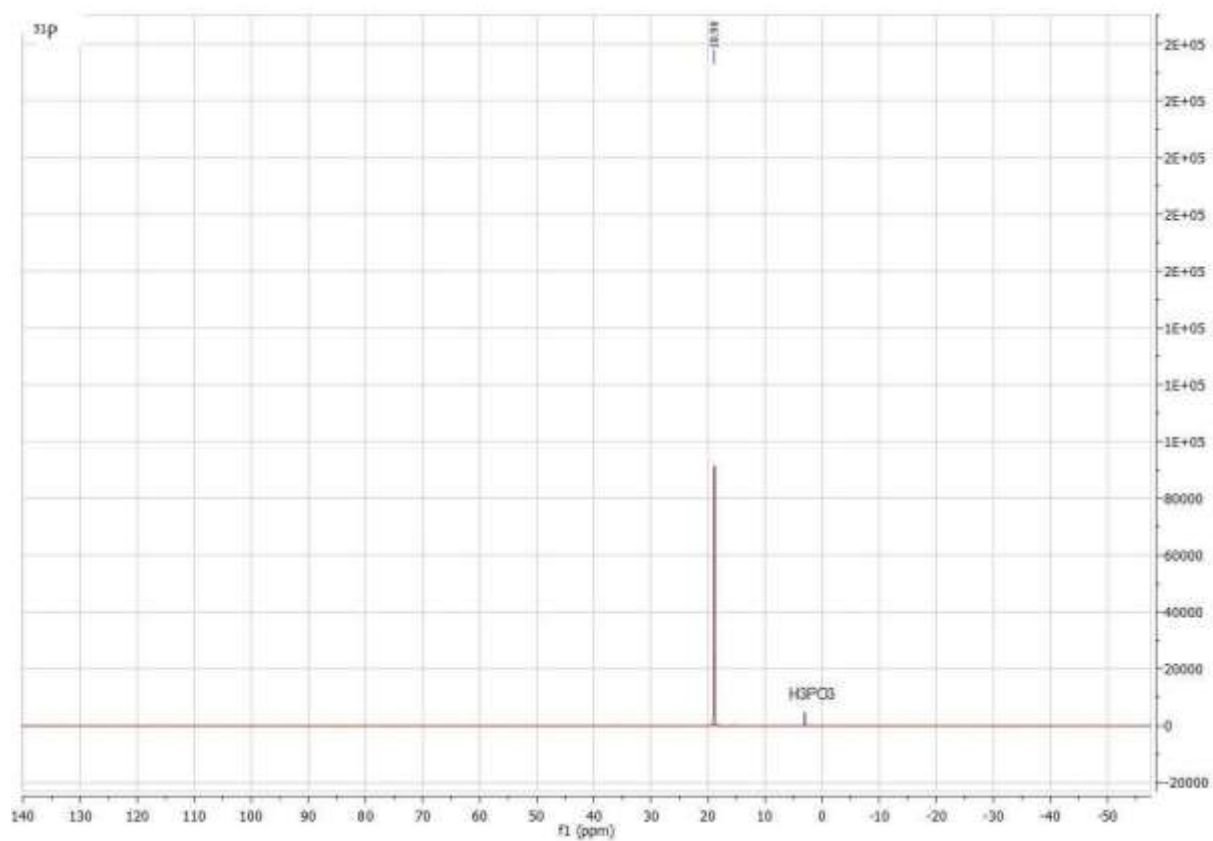
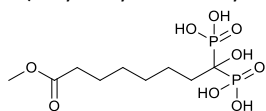


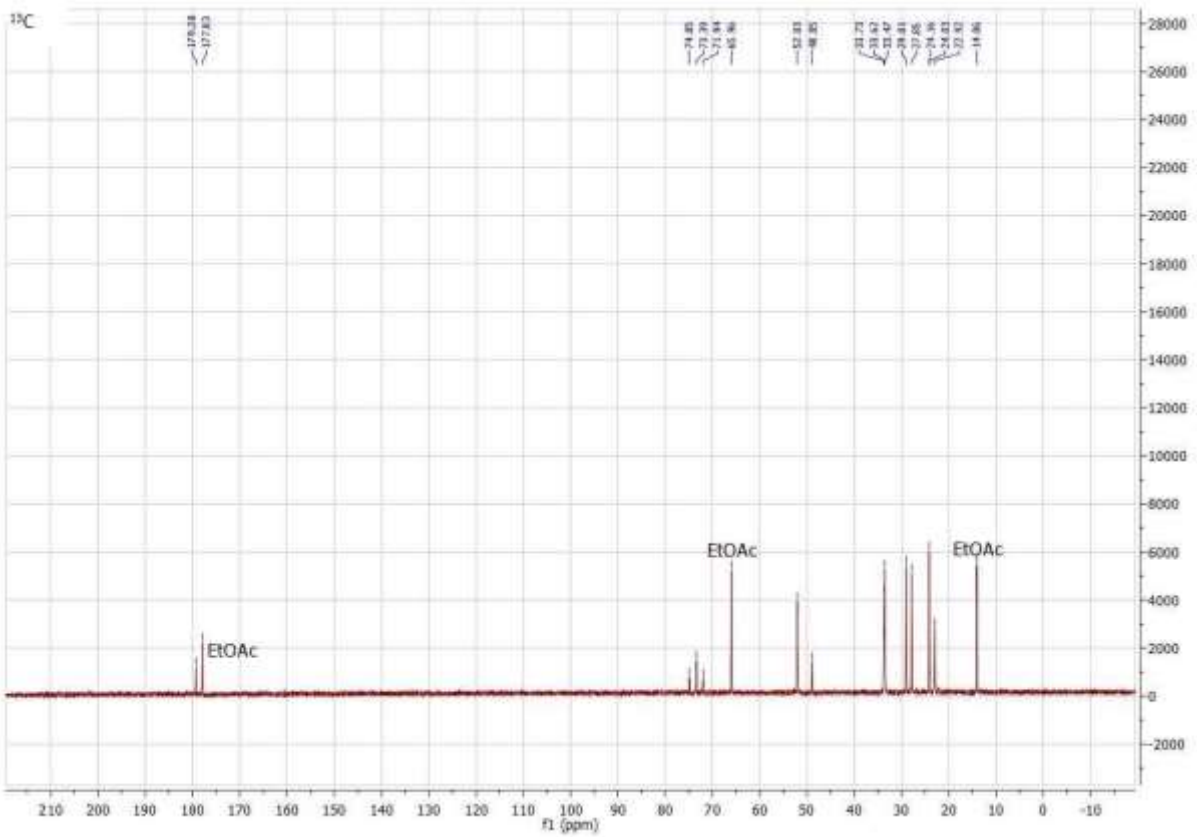
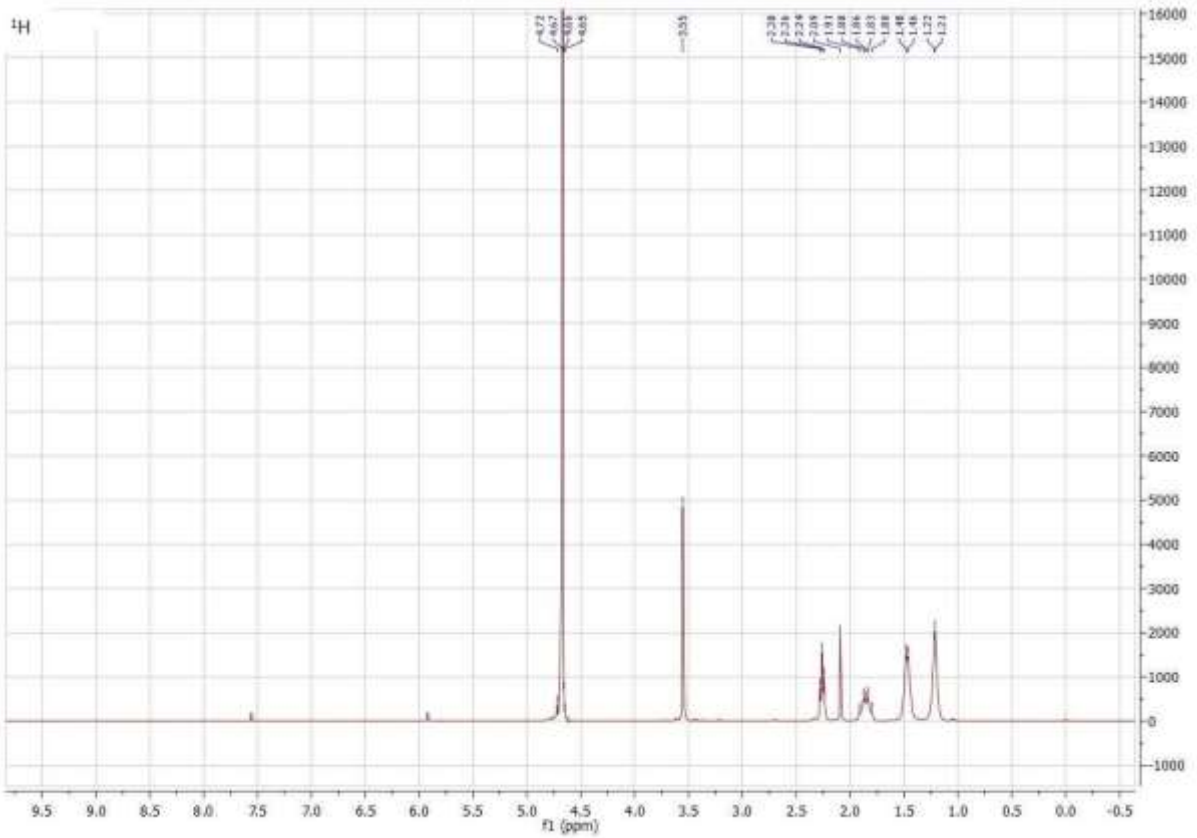
◆ (1-hydroxy-6-methoxy-6-oxohexane-1,1-diyl)diphosphonic acid **2b**



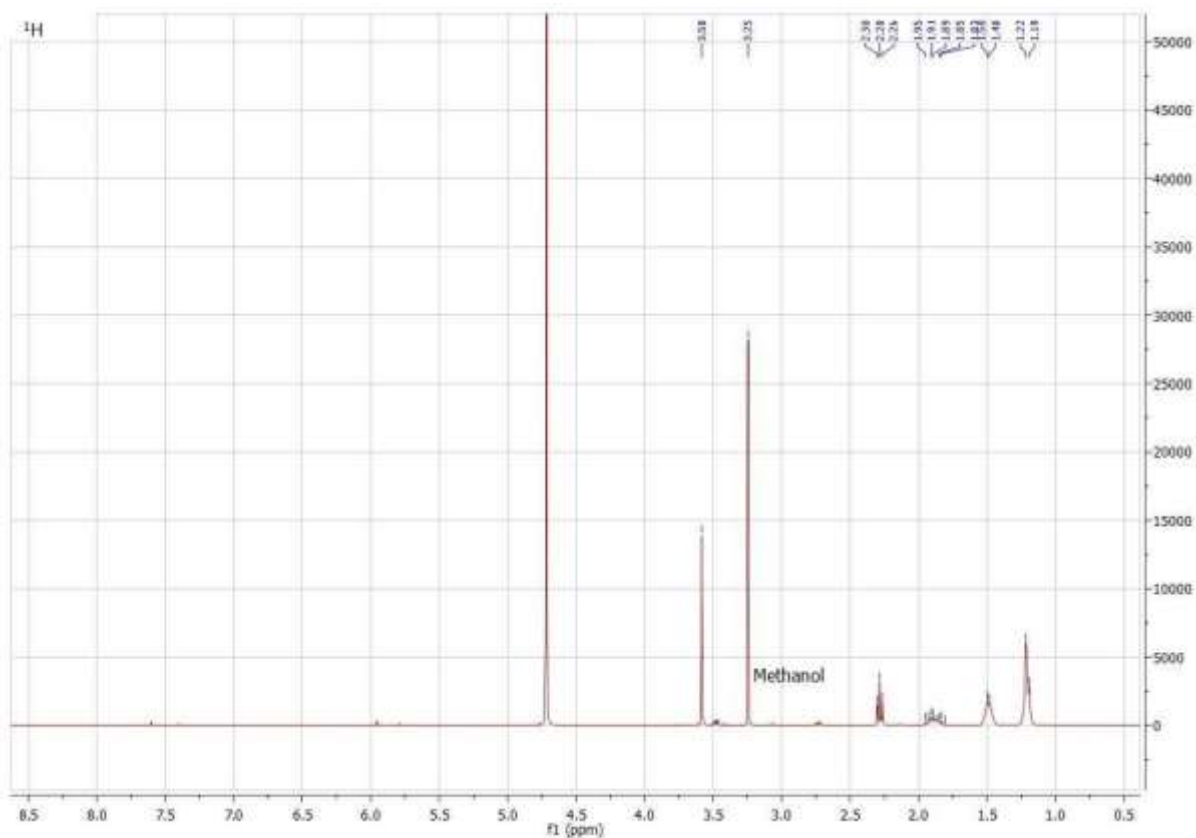
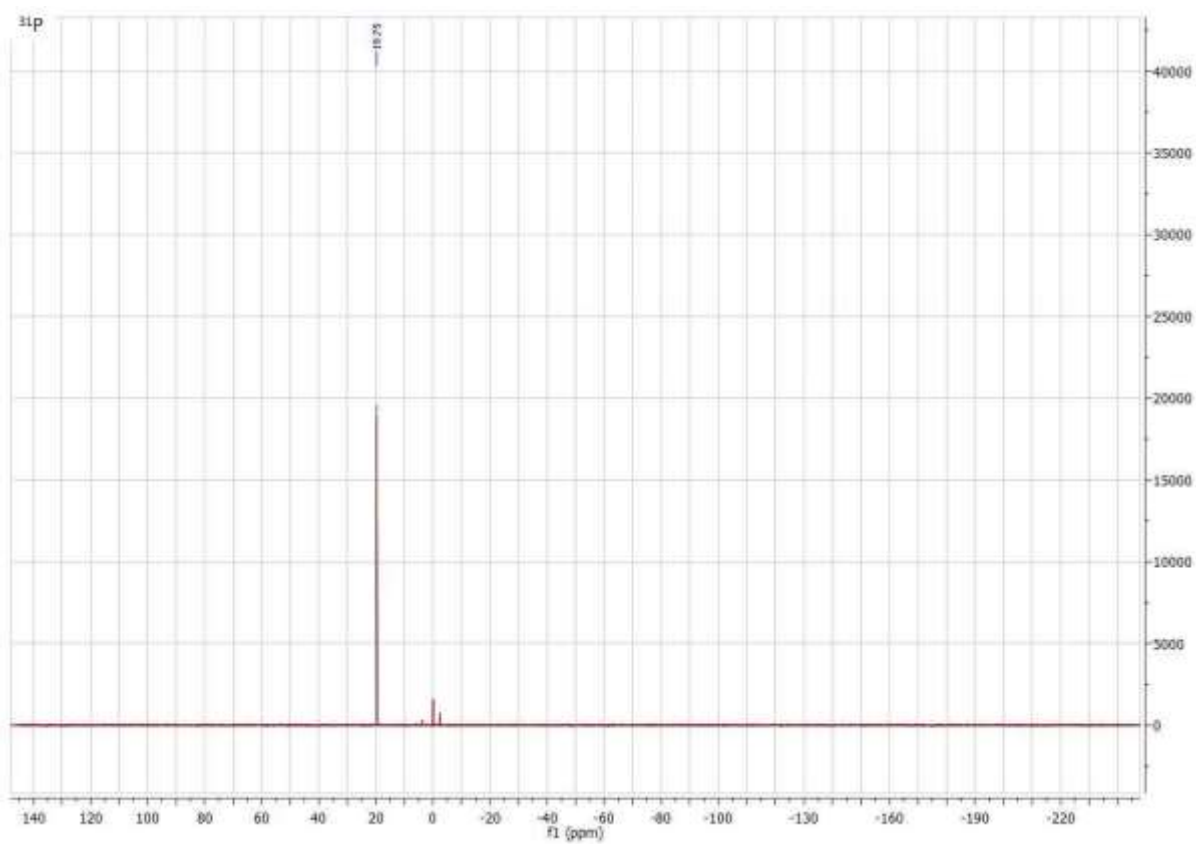
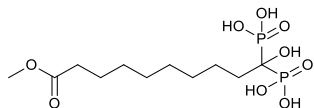


◆ (1-hydroxy-8-methoxy-8-oxooctane-1,1-diyl)diphosphonic acid **2c**

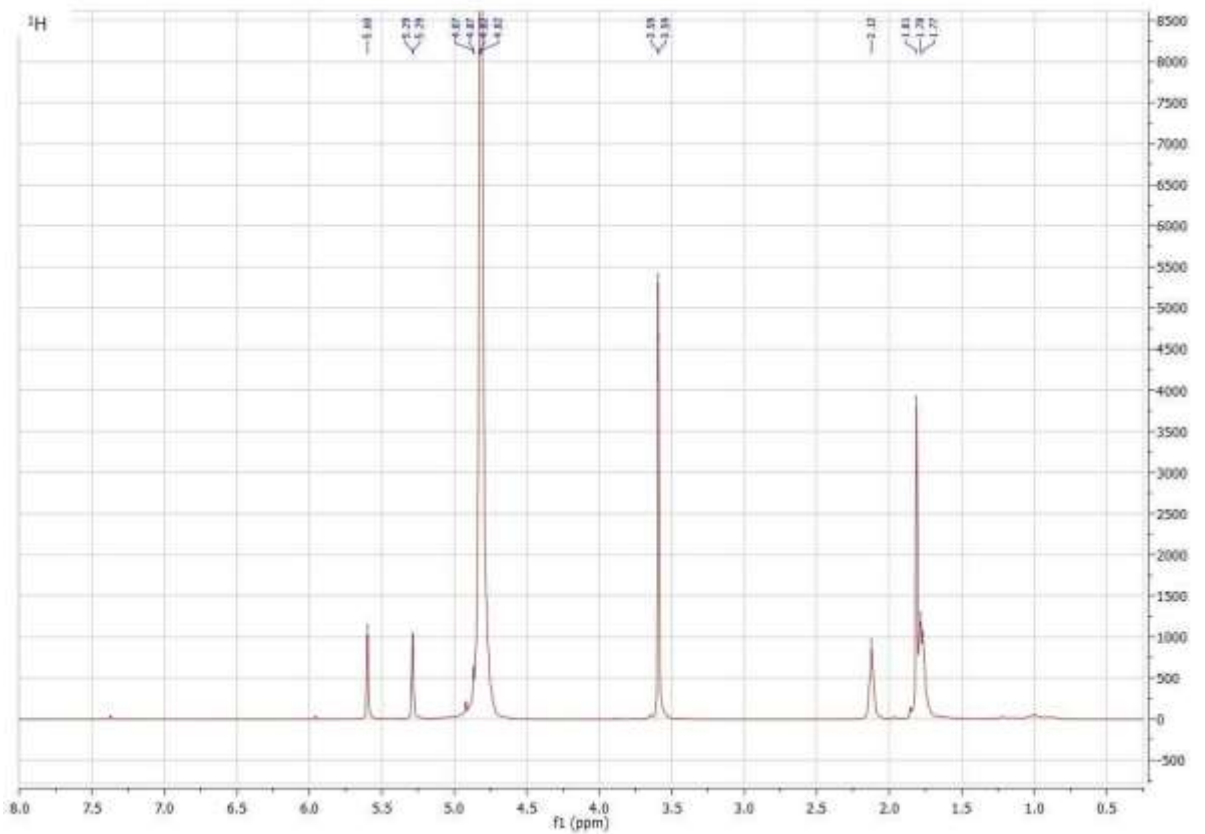
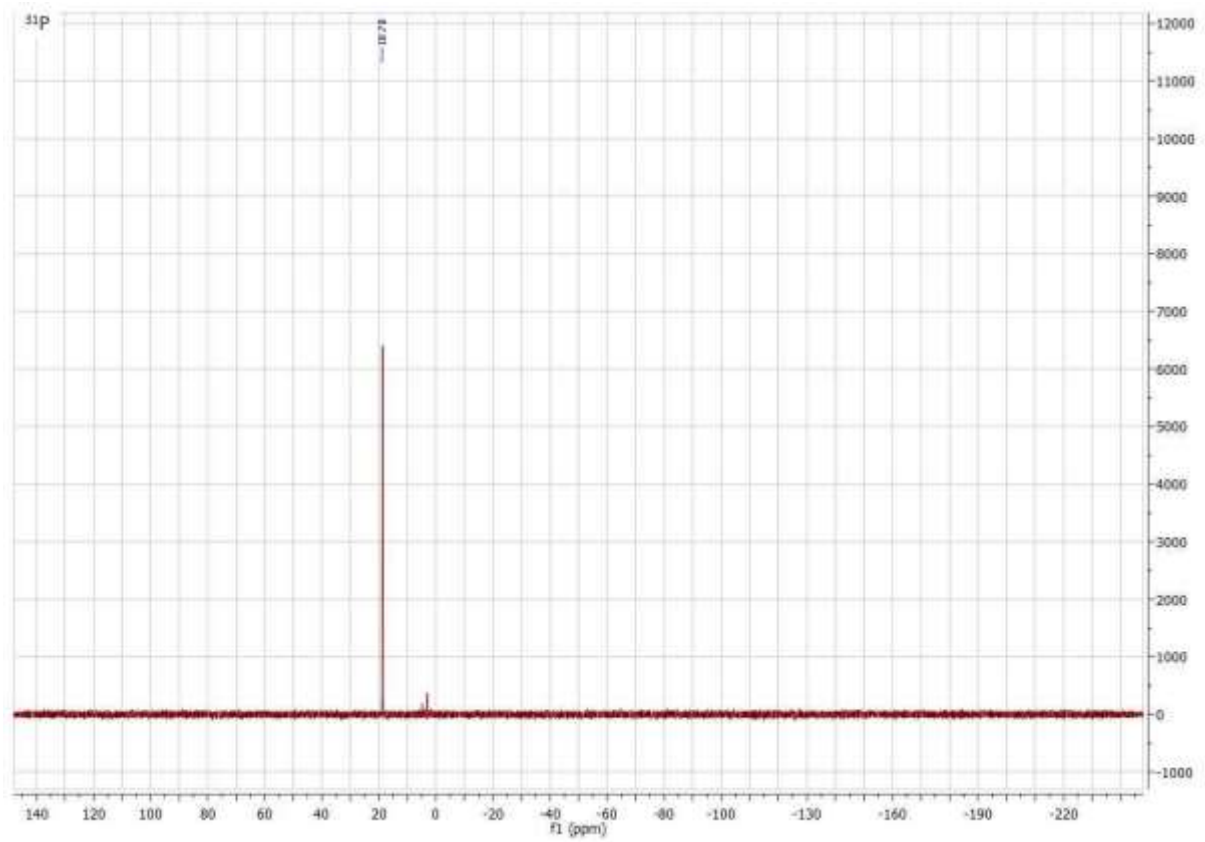
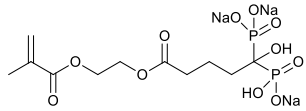


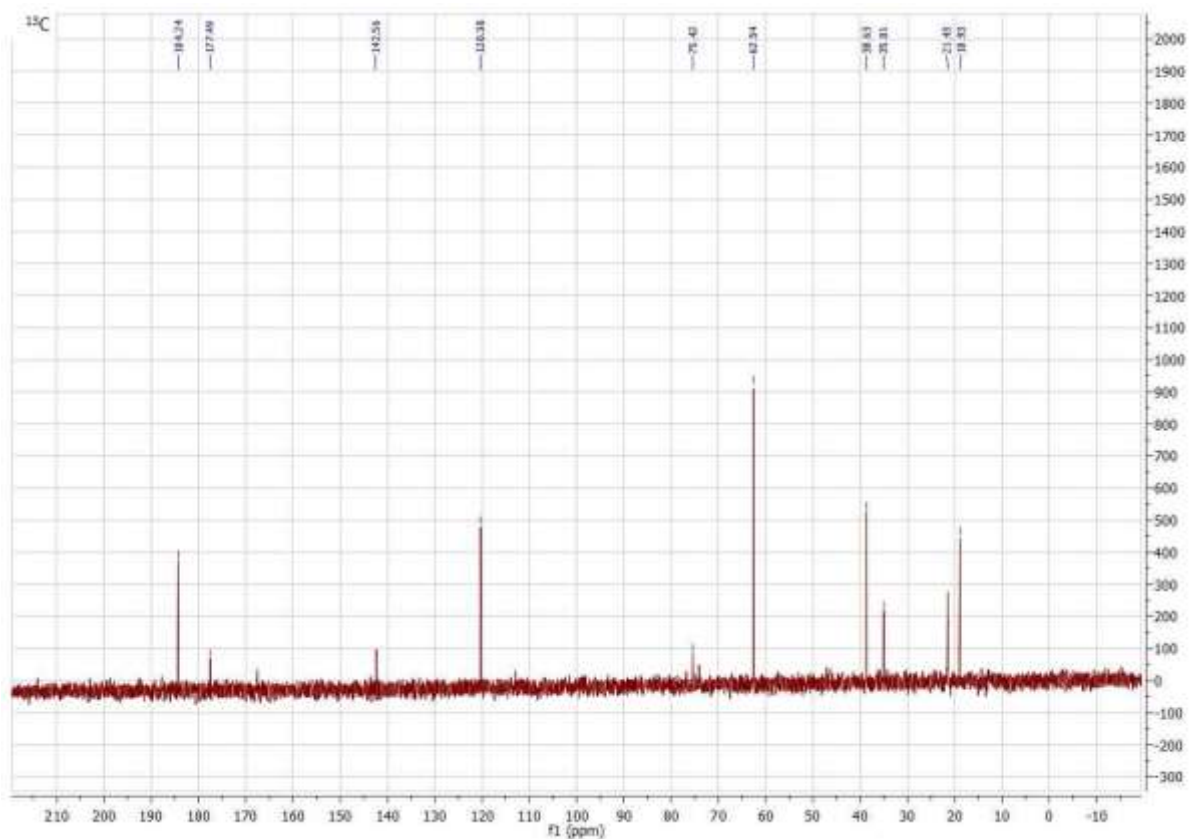


◆ (1-hydroxy-10-methoxy-10-oxodecane-1,1-diyl)diphosphonic acid **2d**

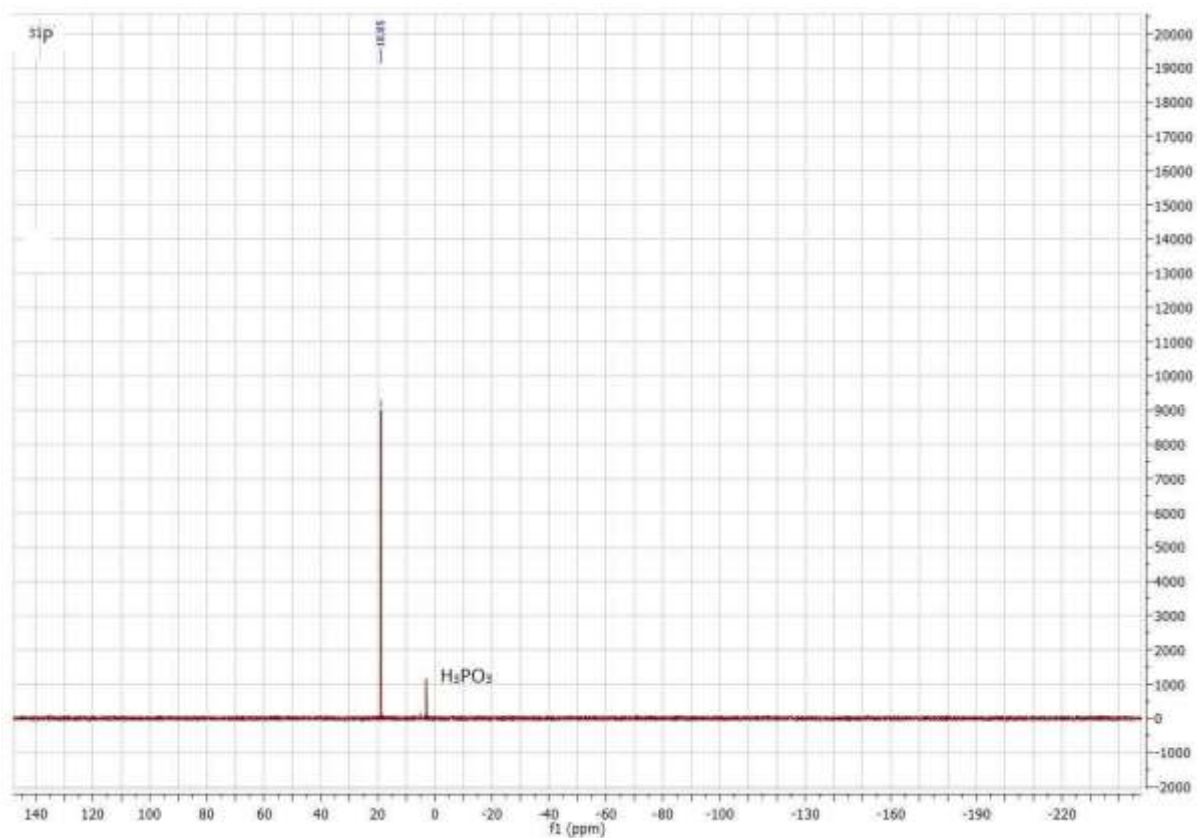
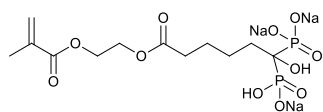


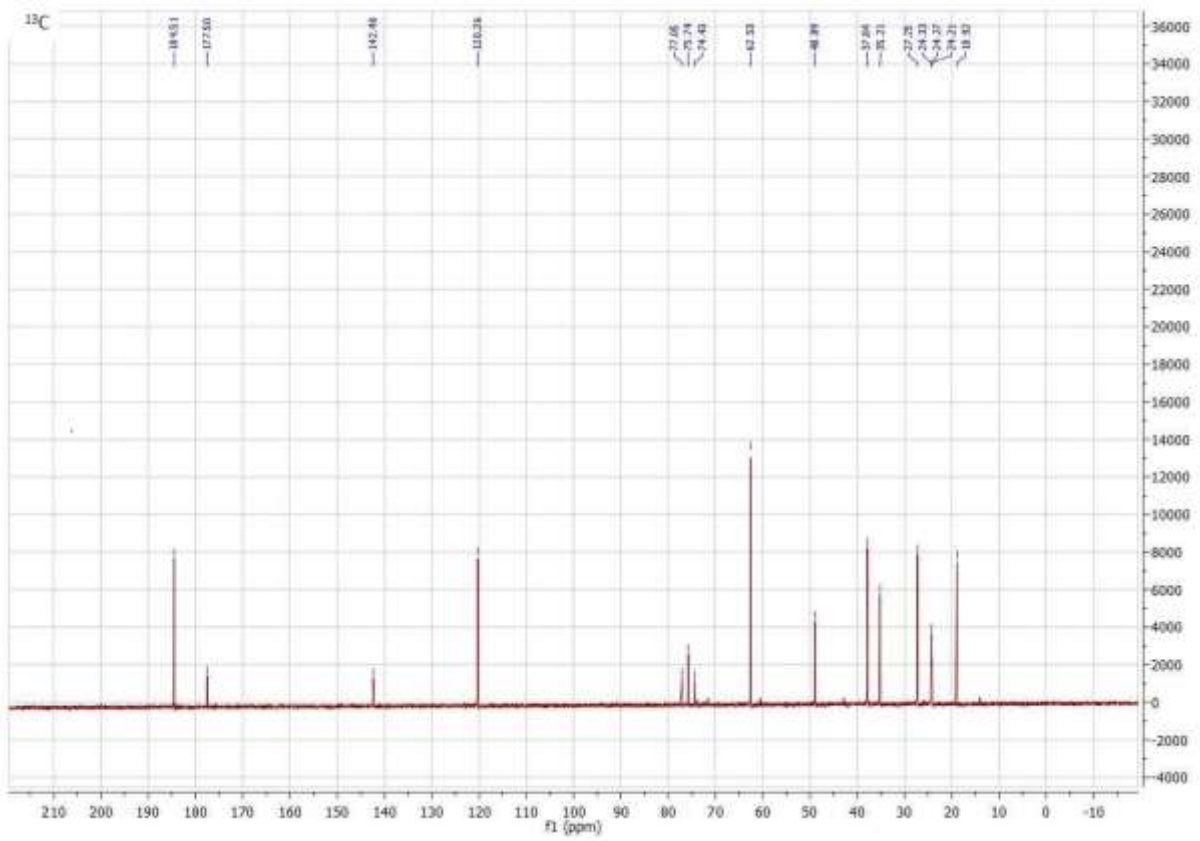
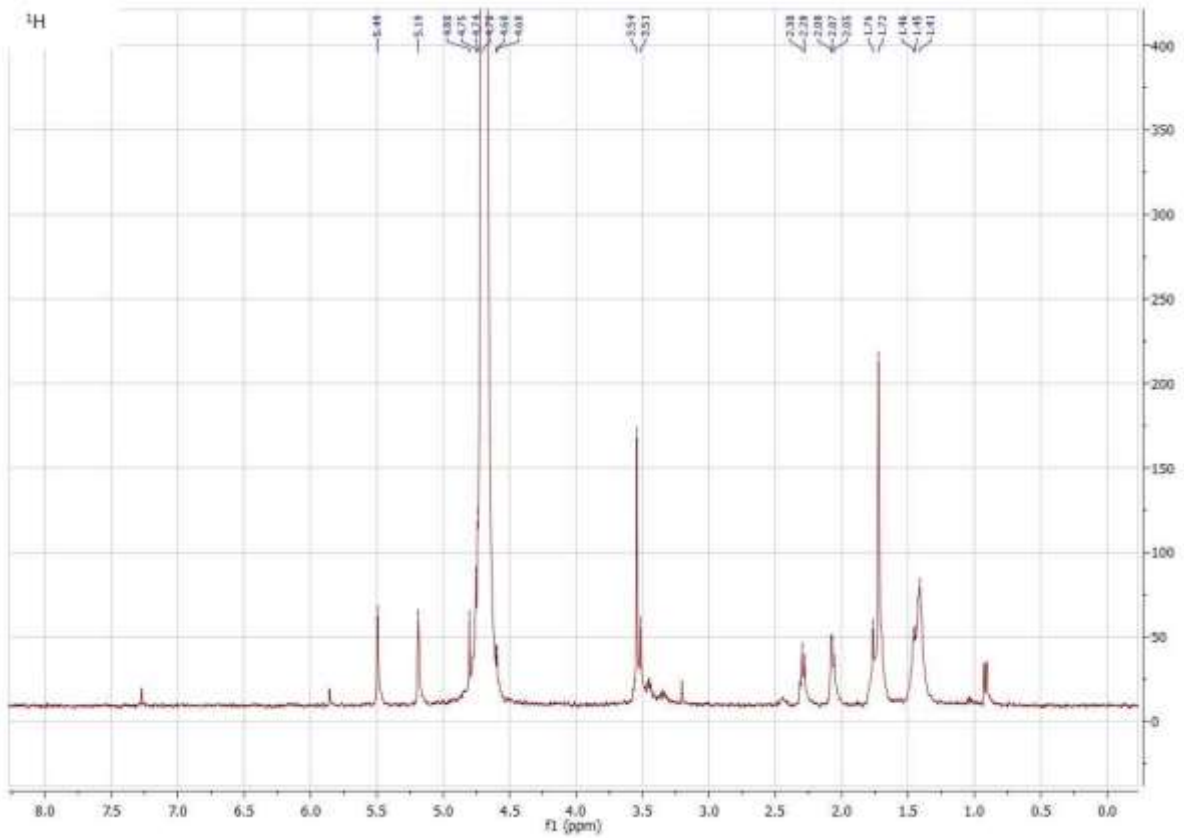
◆ Tri sodium salt of (1-(hydrogenphosphonato)-1-hydroxy-5-(2-(methacryloyloxy)ethoxy)-5-oxopentyl)phosphonate Ia



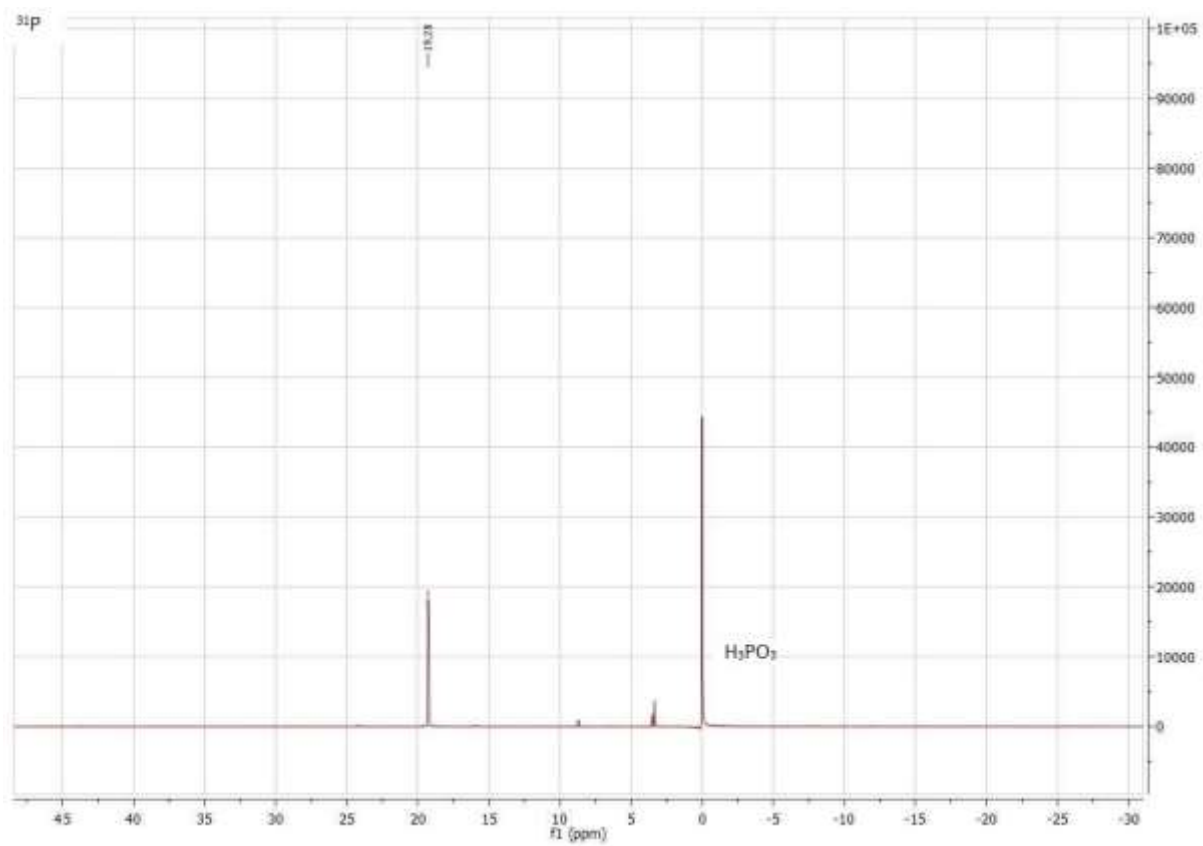
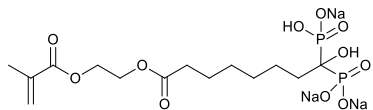


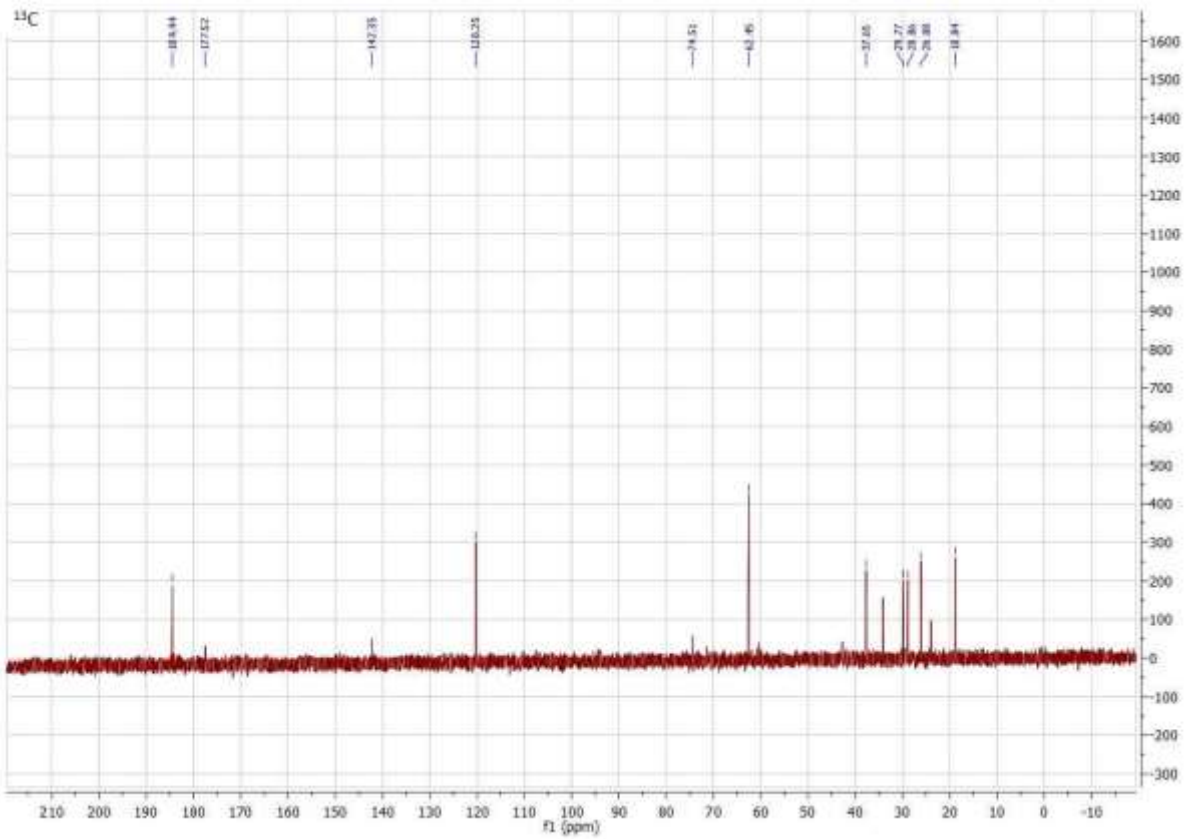
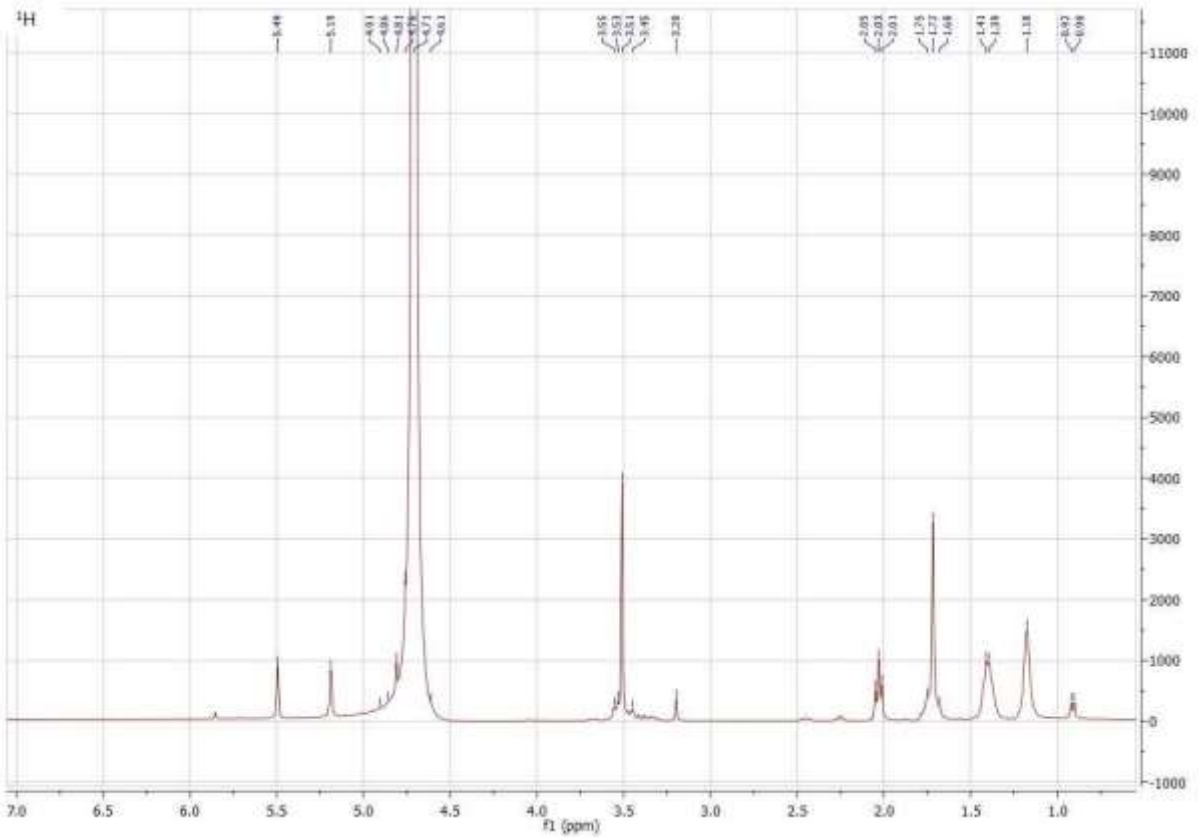
◆ Tri sodium salt of (1-(hydrogenphosphonato)-1-hydroxy-6-(2-(methacryloyloxy)ethoxy)-6-oxohexyl)phosphonate **1b**



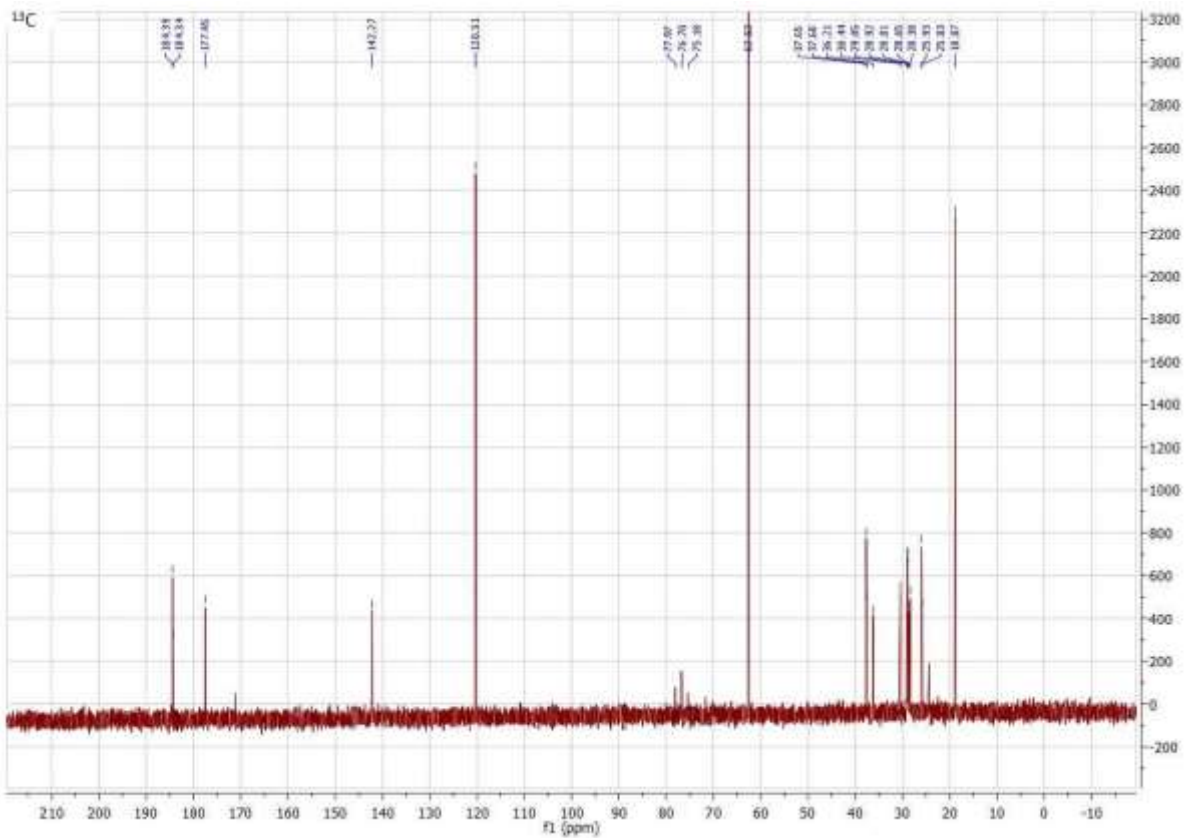
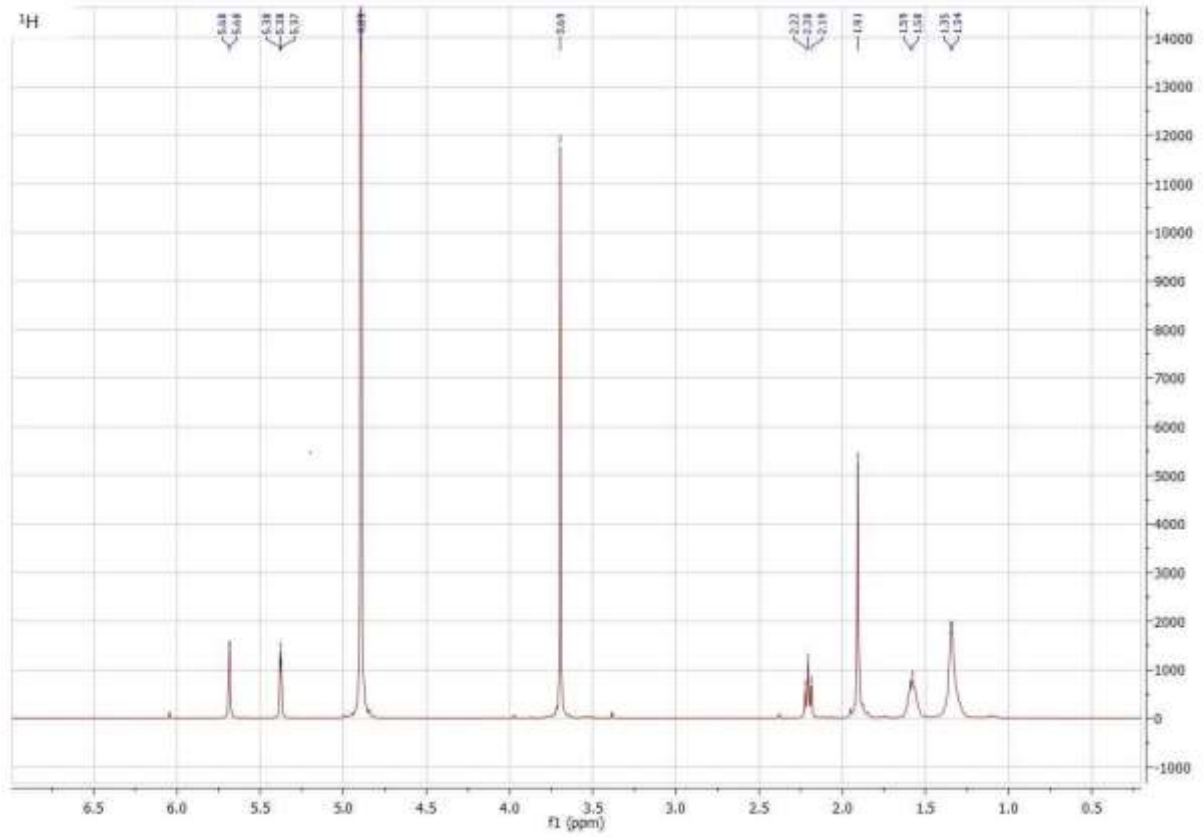
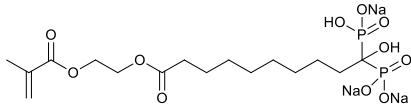


◆ Tri sodium salt of (1-(hydrogenphosphonato)-1-hydroxy-8-(2-(methacryloyloxy)ethoxy)-8-oxooctyl)phosphonate 1c

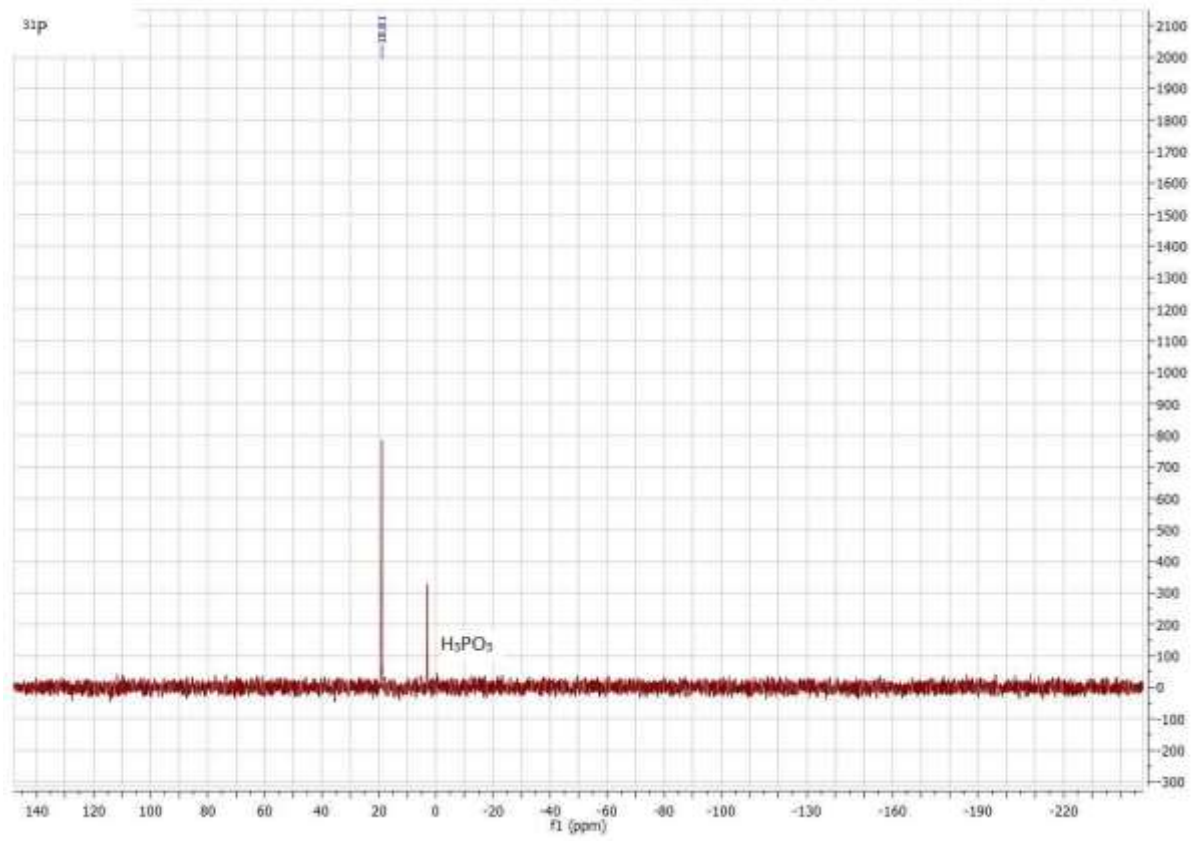
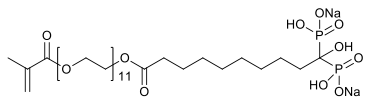


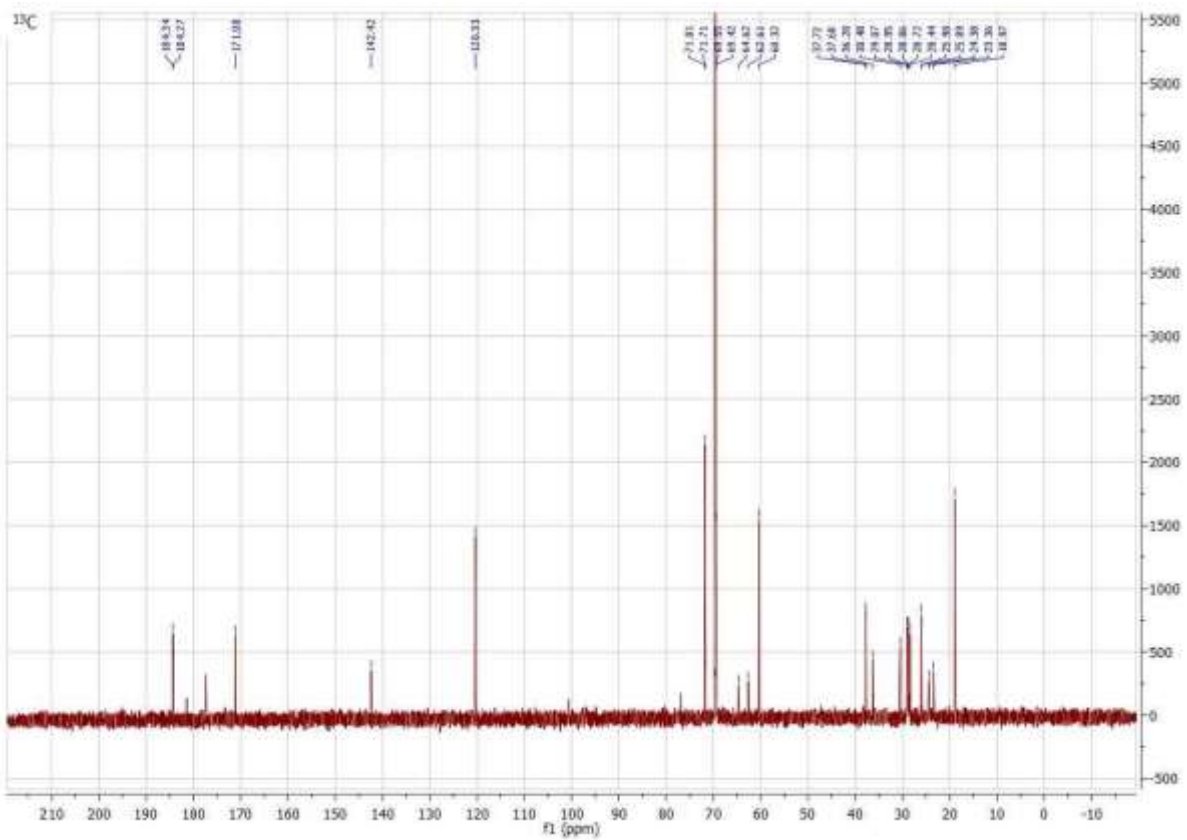
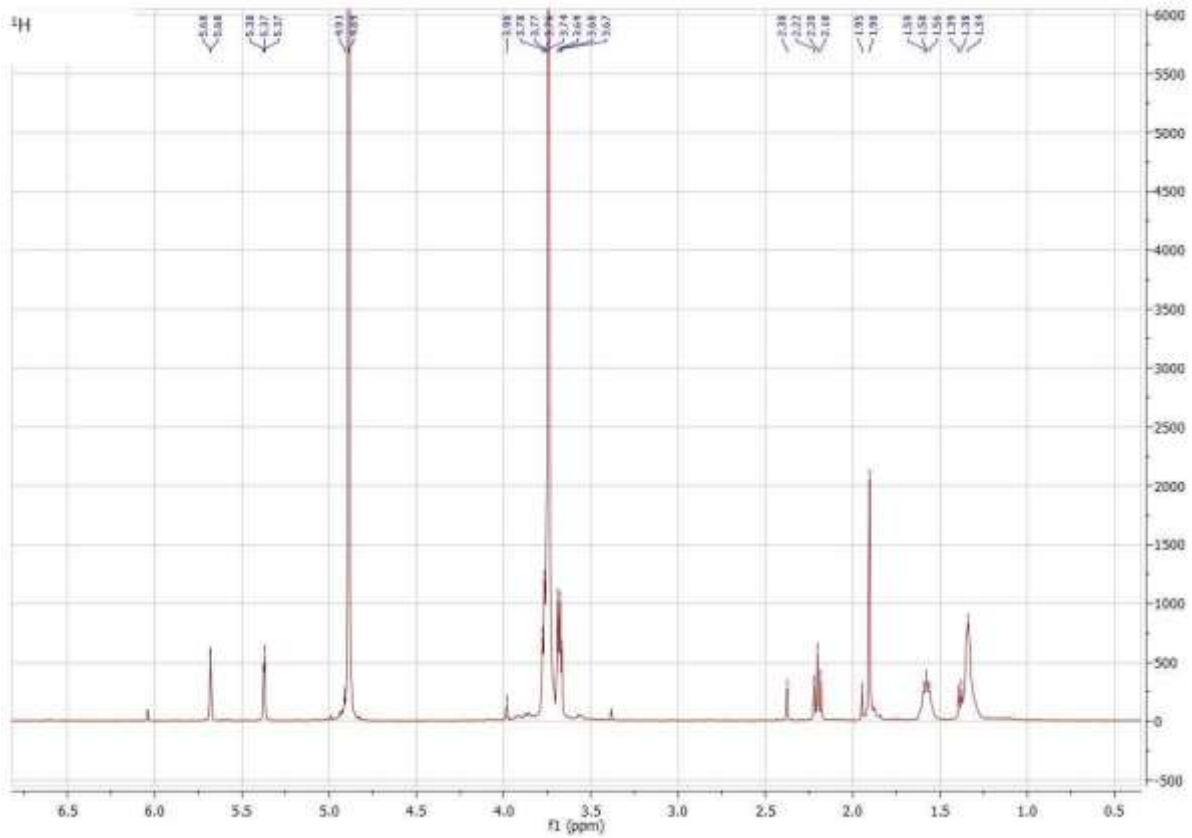


◆ Tri sodium salt of (1-(hydrogenphosphonato)-1-hydroxy-10-(2-(methacryloyloxy)ethoxy)-10-oxodecyl)phosphonate Id



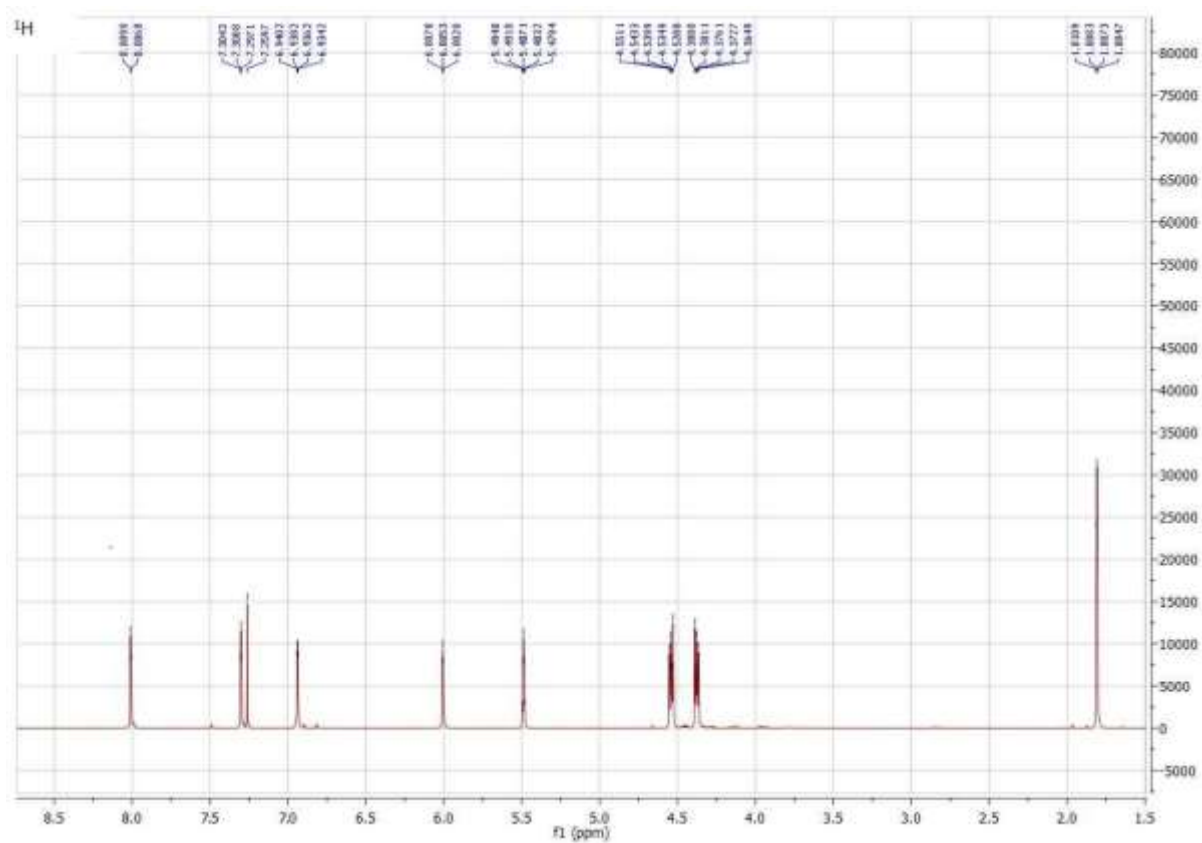
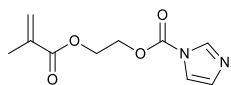
◆ Tri sodium salt of (47-hydroxy-2-methyl-3,38-dioxo-4,7,10,13,16,19,22,25,28,31,34,37-dodecaoxaheptatetracont-1-ene-47,47-diyl)bis(hydrogenphosphonate) **Ie**

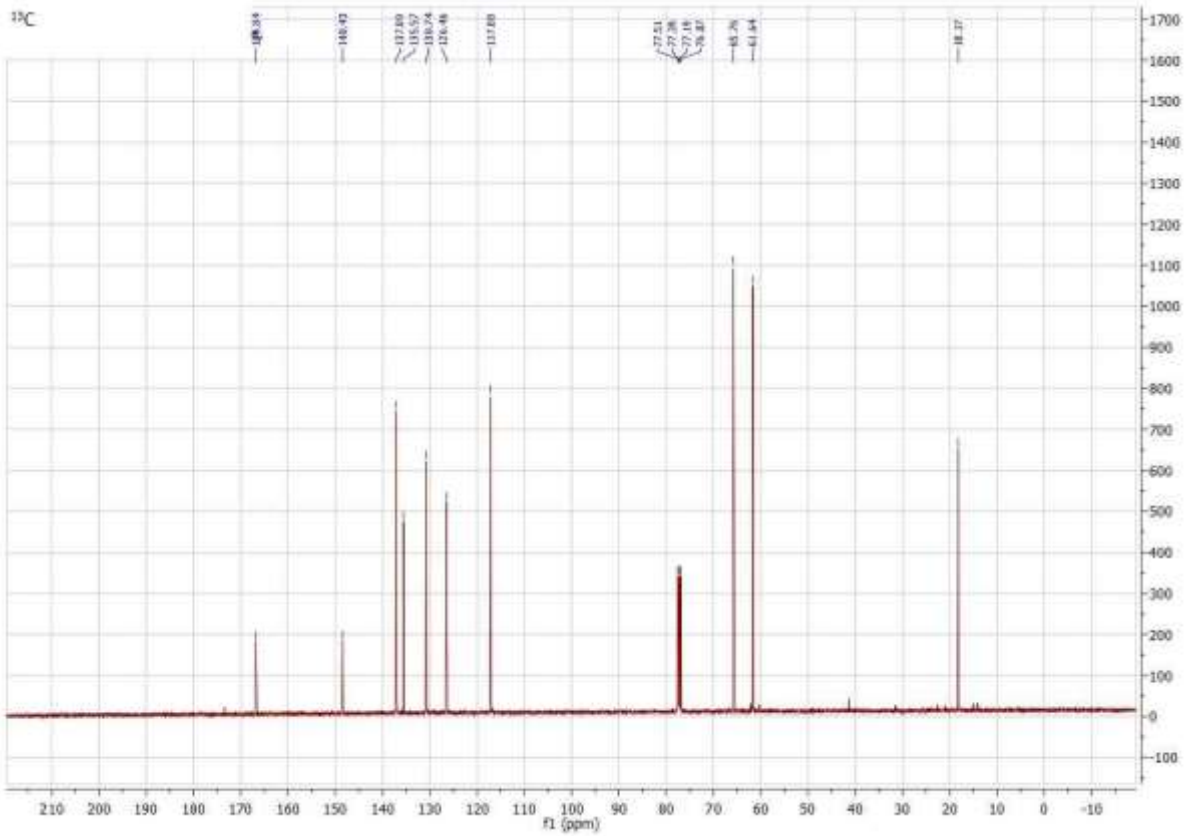




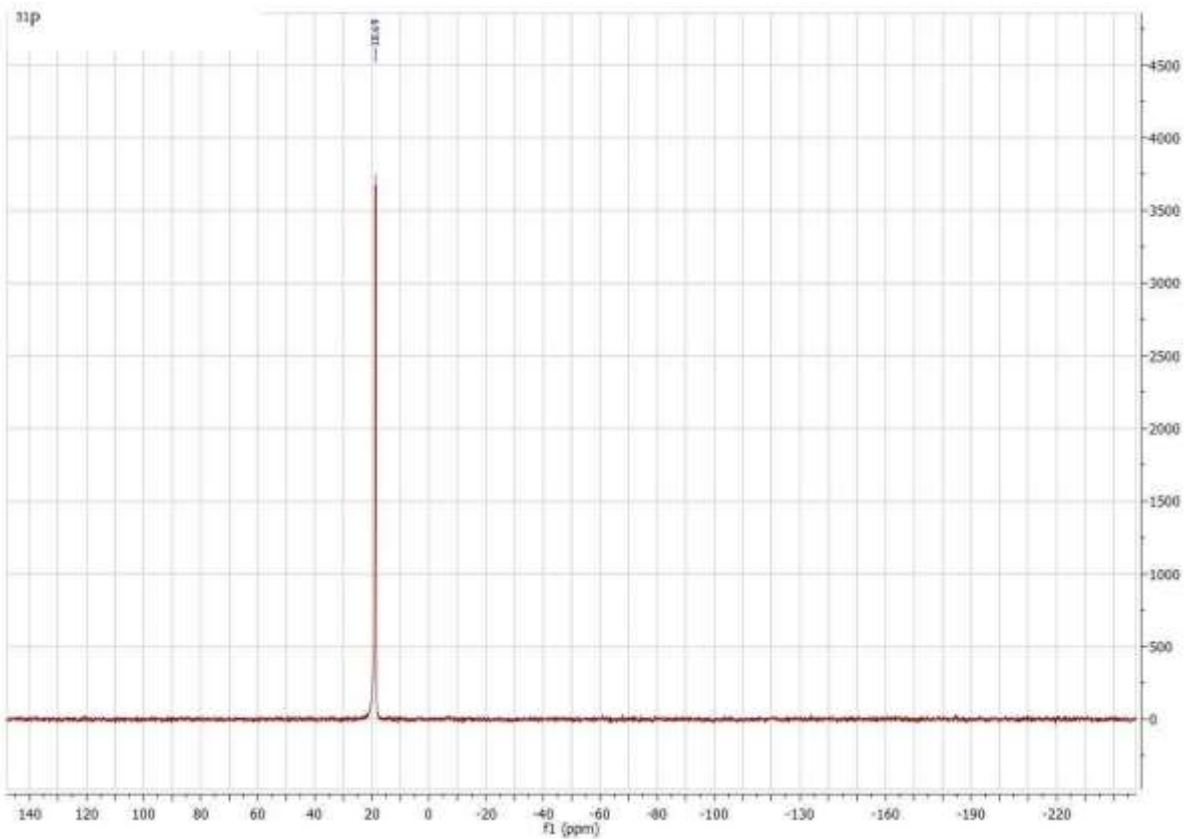
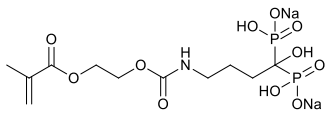
2) Synthesis of acrylic ester bisphosphonates If-g

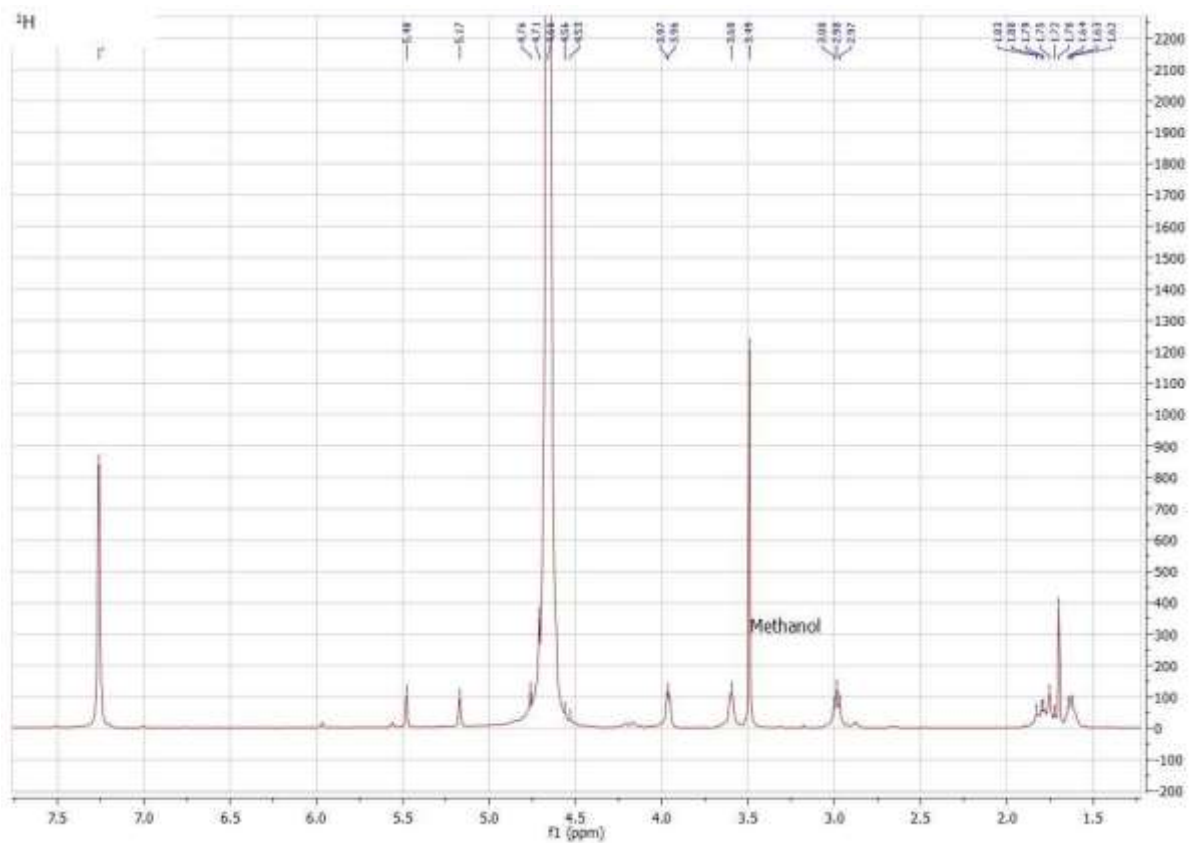
◆ 2-(methacryloyloxy)ethyl 1H-imidazole-1-carboxylate **6**



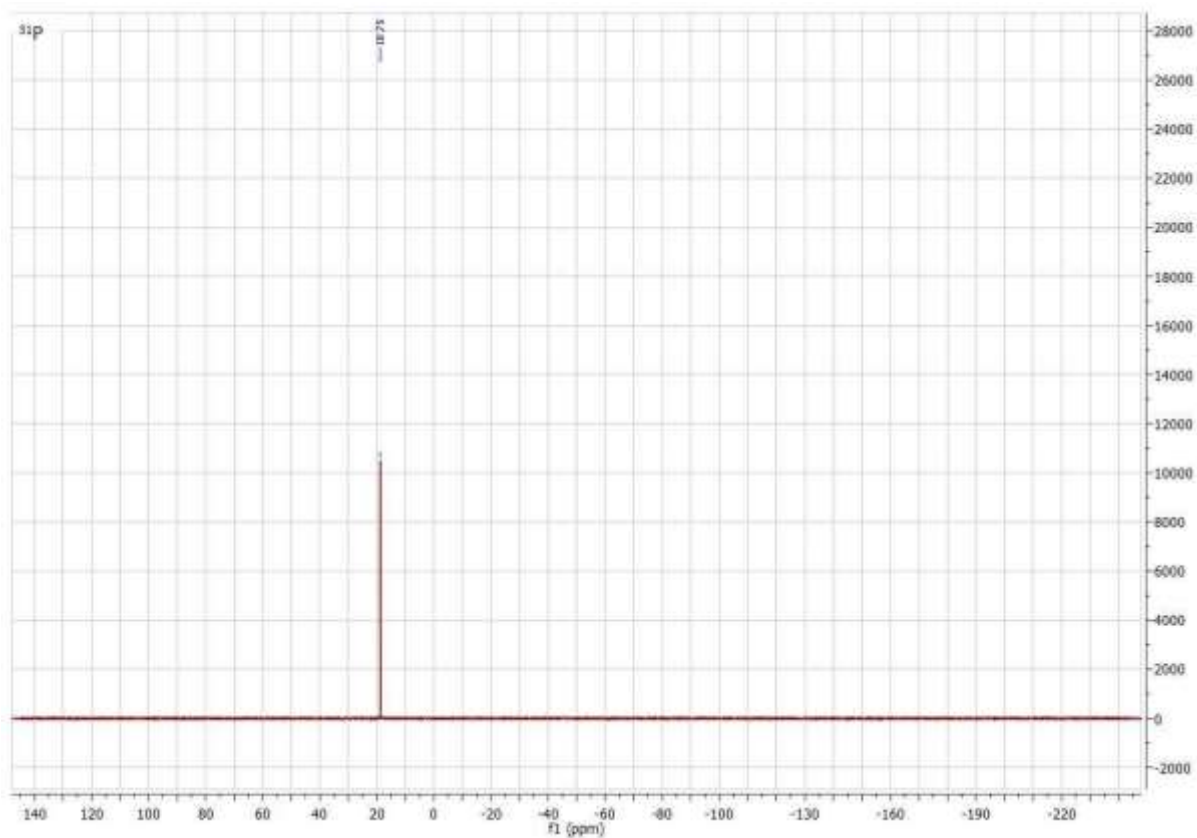
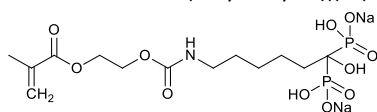


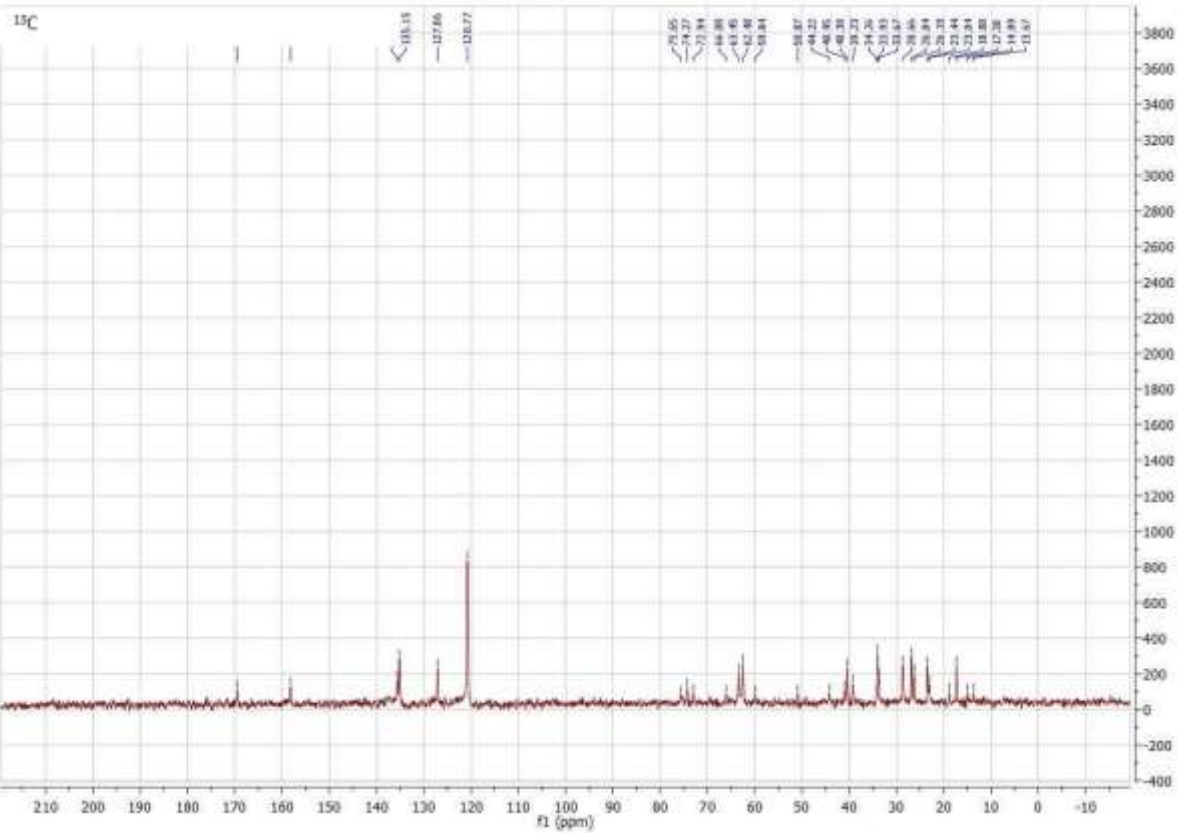
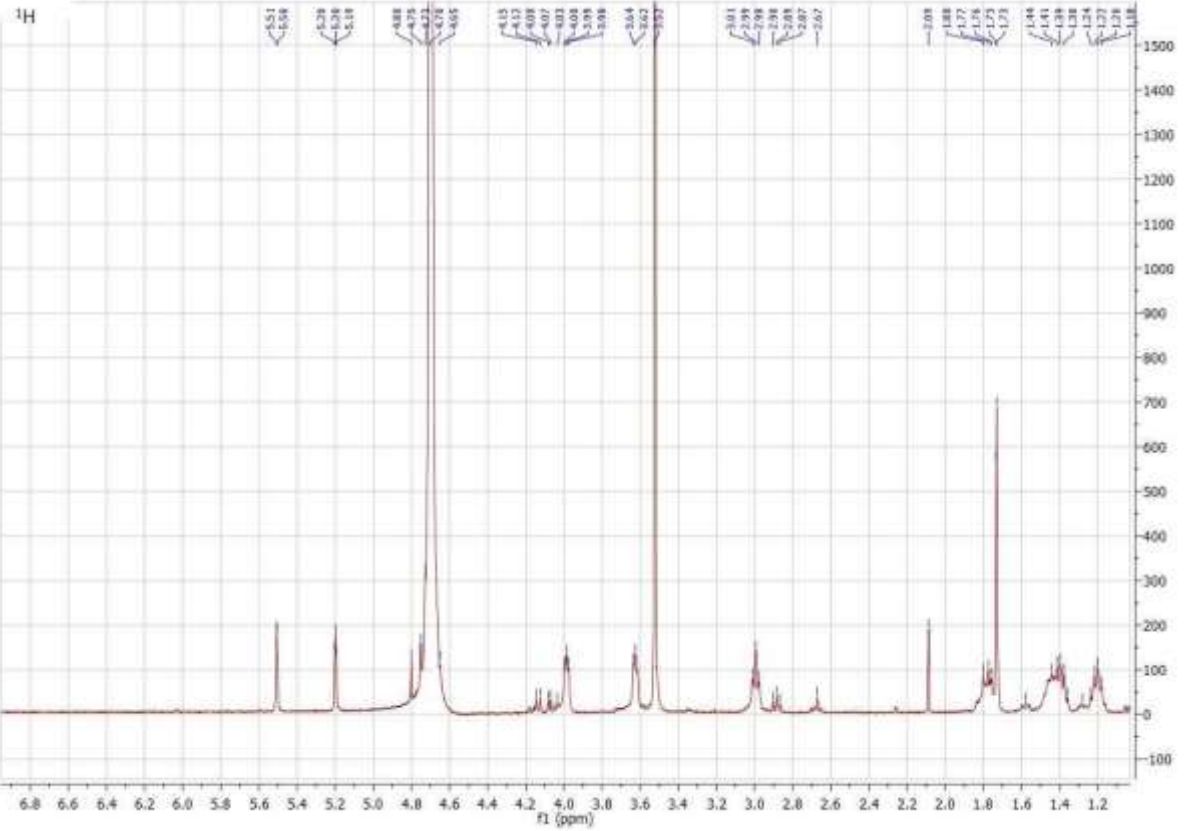
◆ Disodium salt of (1-hydroxy-4-(((2-(methacryloyloxy)ethoxy)carbonyl)amino)butane-1,1-diyl)bis(hydrogenphosphonate) **If**





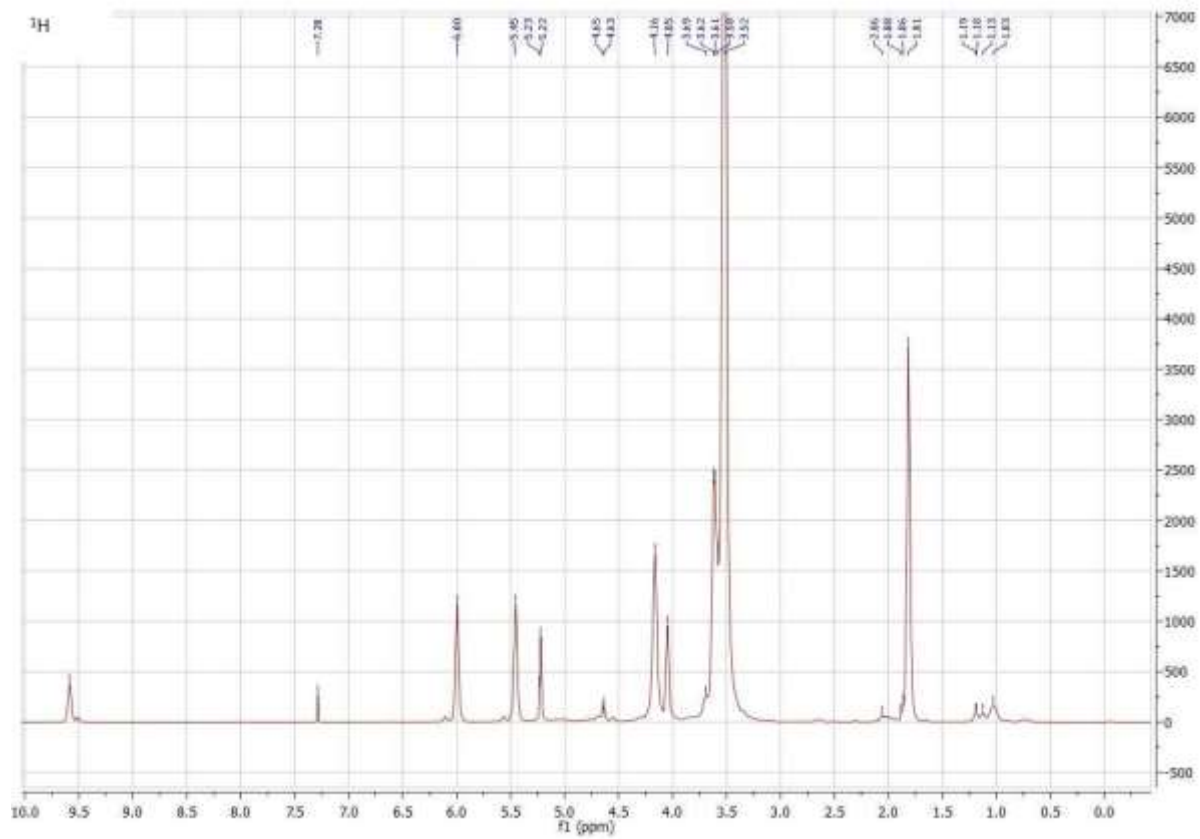
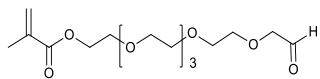
◆ Disodium salt of (1-hydroxy-6-(((2-(methacryloyloxy)ethoxy)carbonyl)amino)hexane-1,1-diyl)bis(hydrogenphosphonate) **Ig**

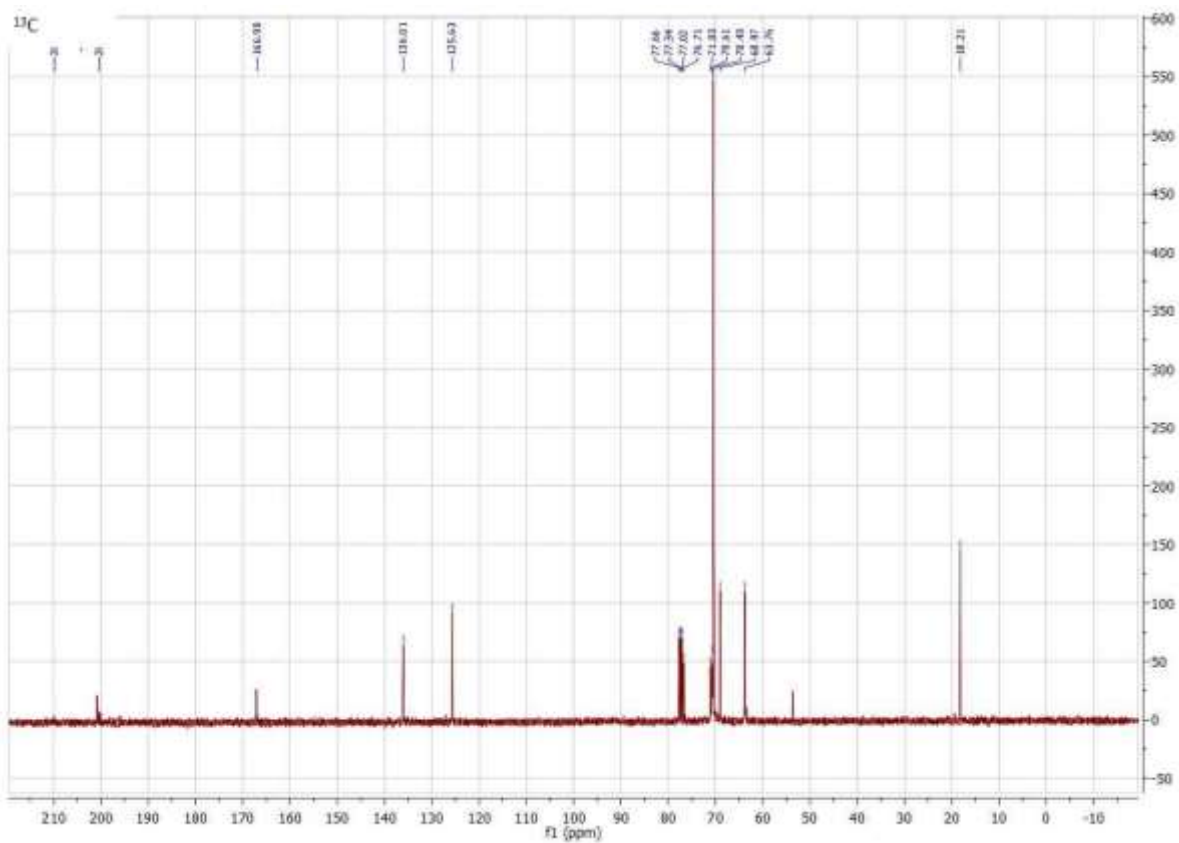




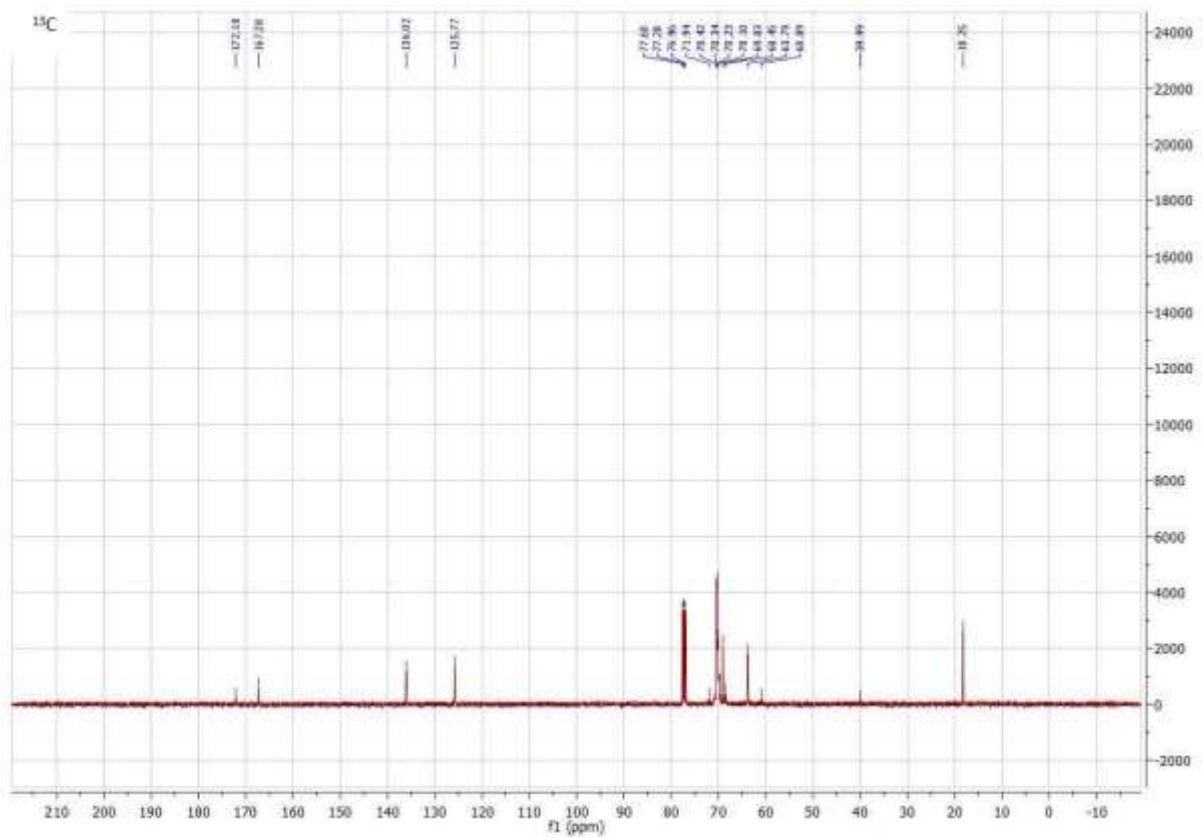
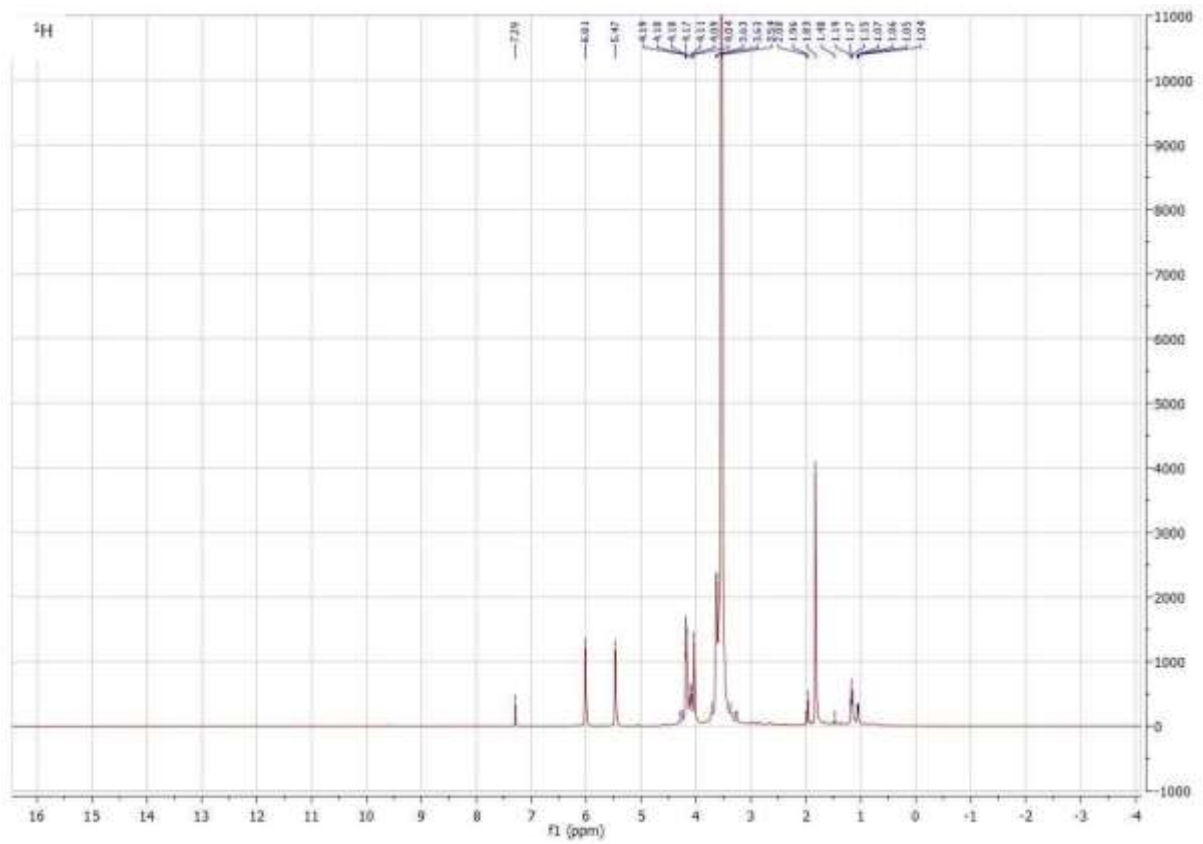
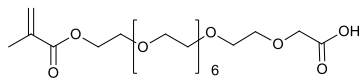
3) Synthesis of acrylic ester bisphosphonates lh-k and lm-o

◆ 17-oxo-3,6,9,12,15-pentaoxaheptadecyl methacrylate 7a

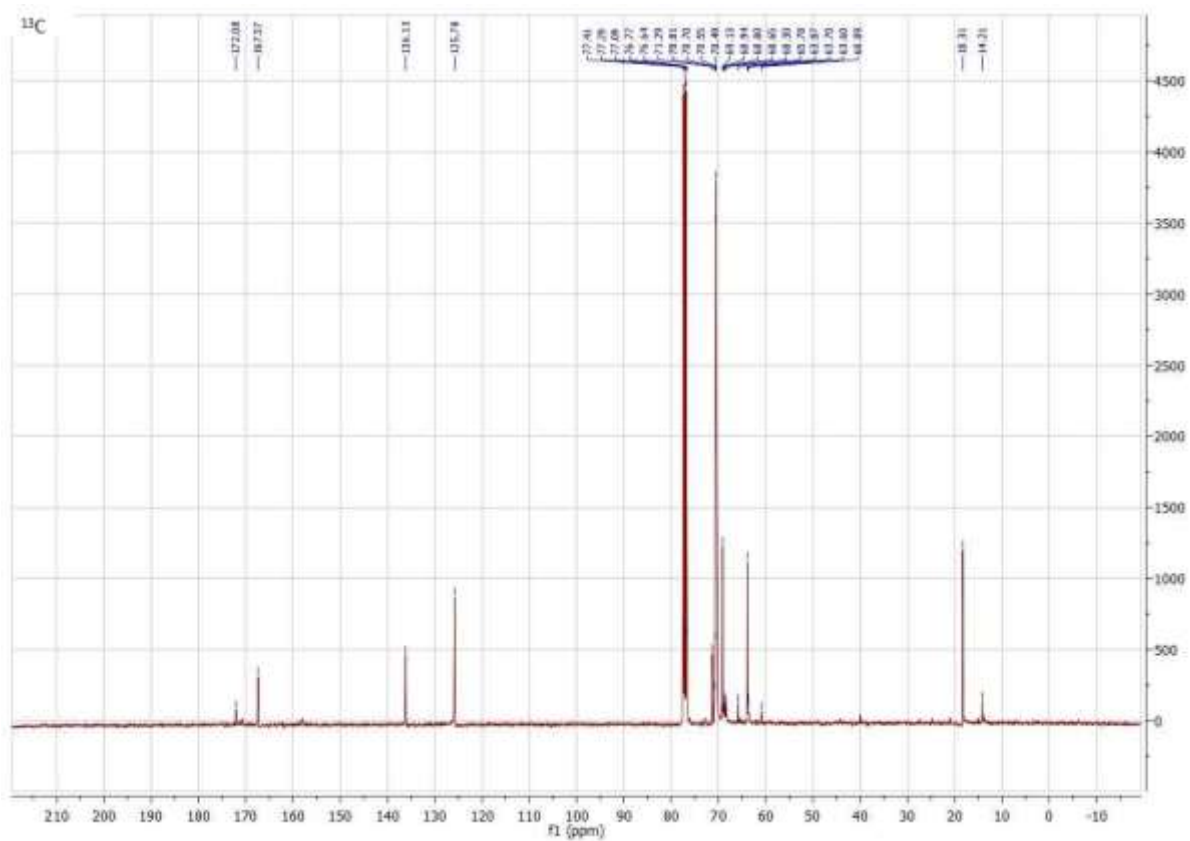
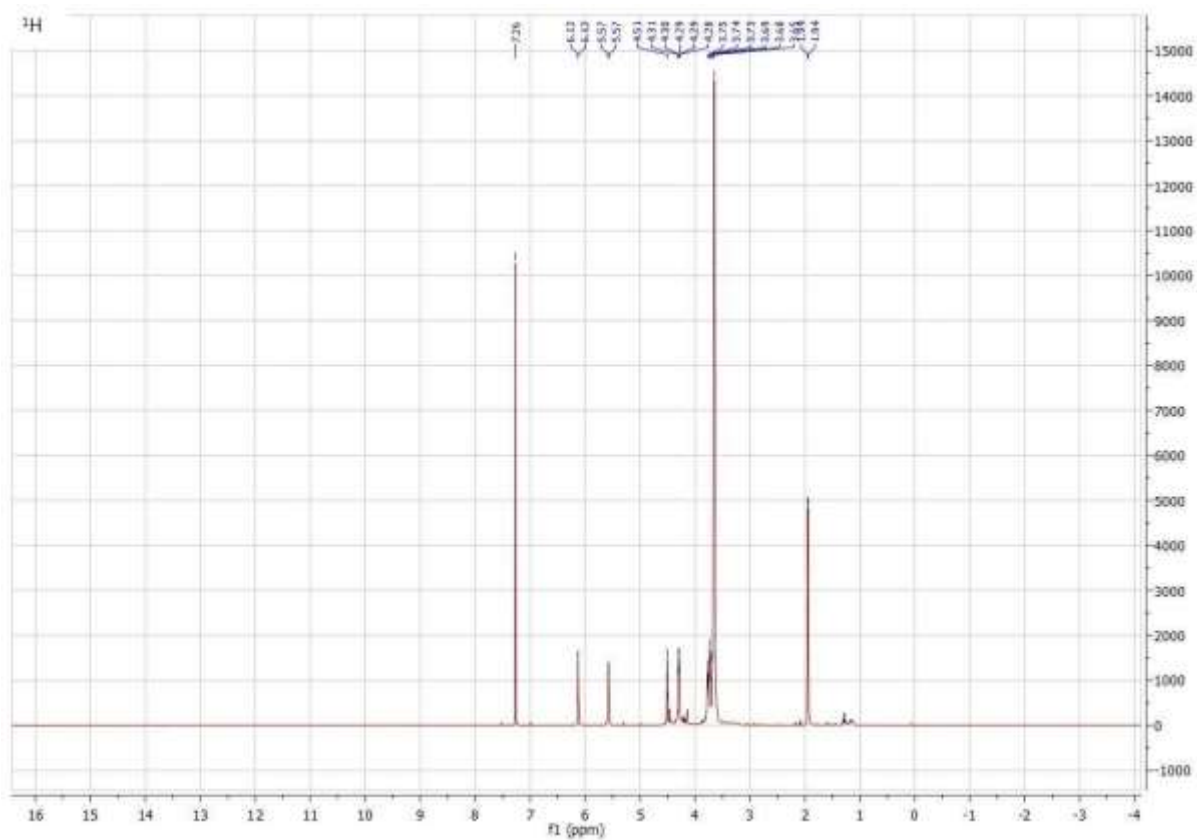
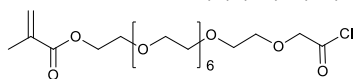




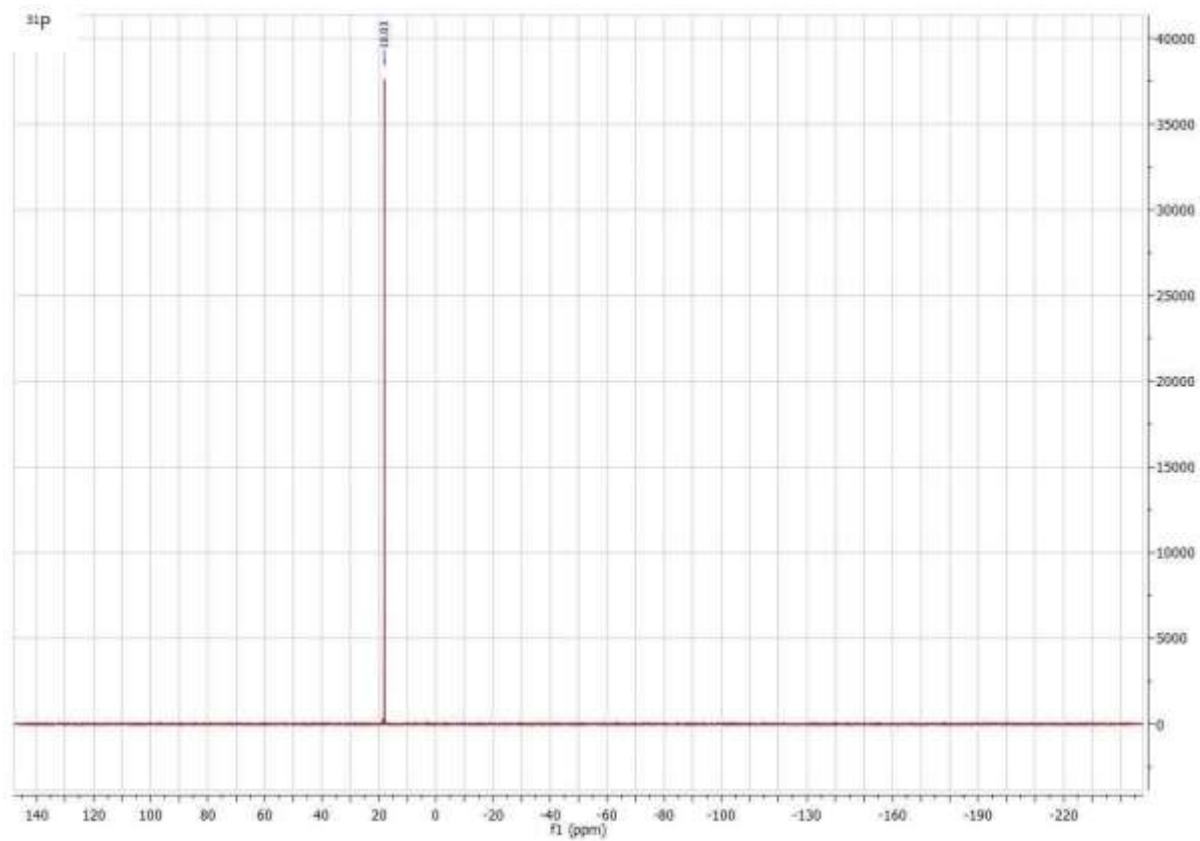
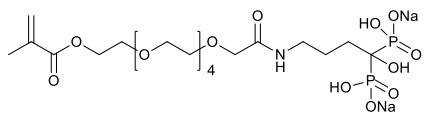
◆ 29-methyl-28-oxo-3,6,9,12,15,18,21,24,27-nonaoxatriacont-29-en-1-oic acid **8b**

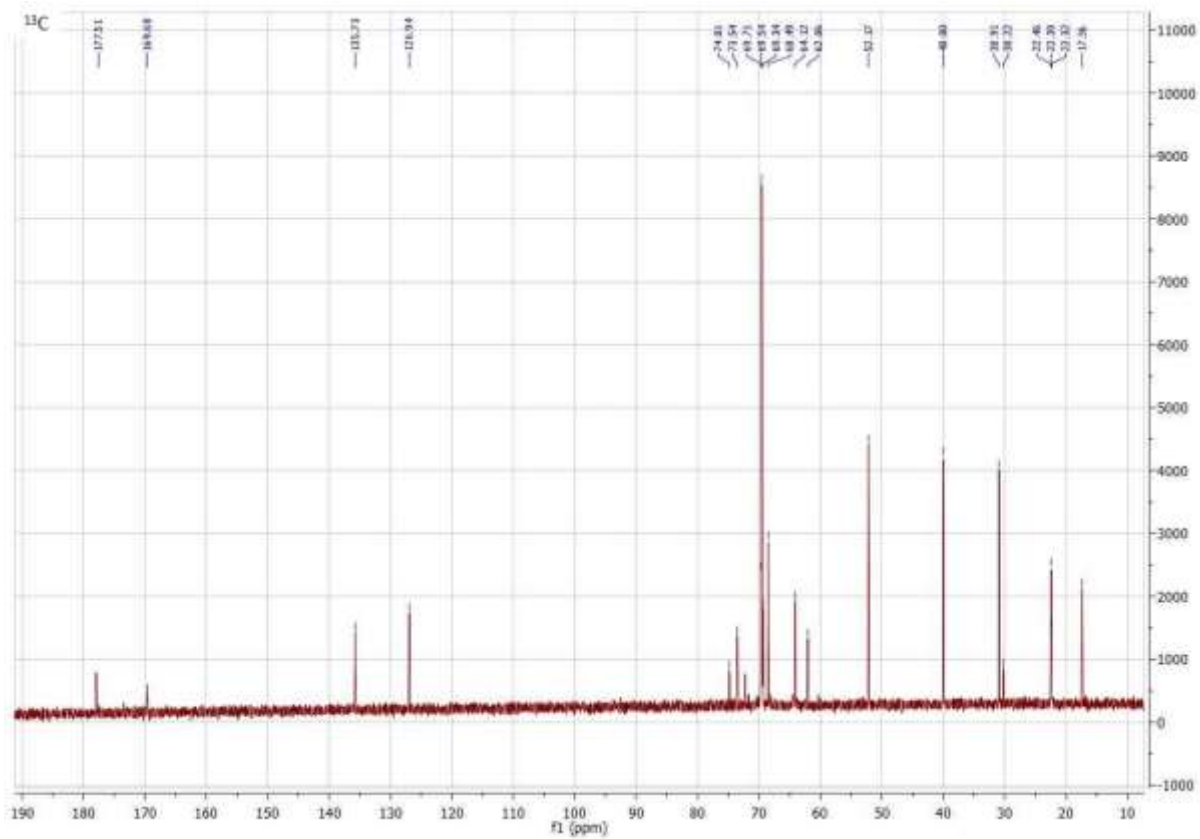
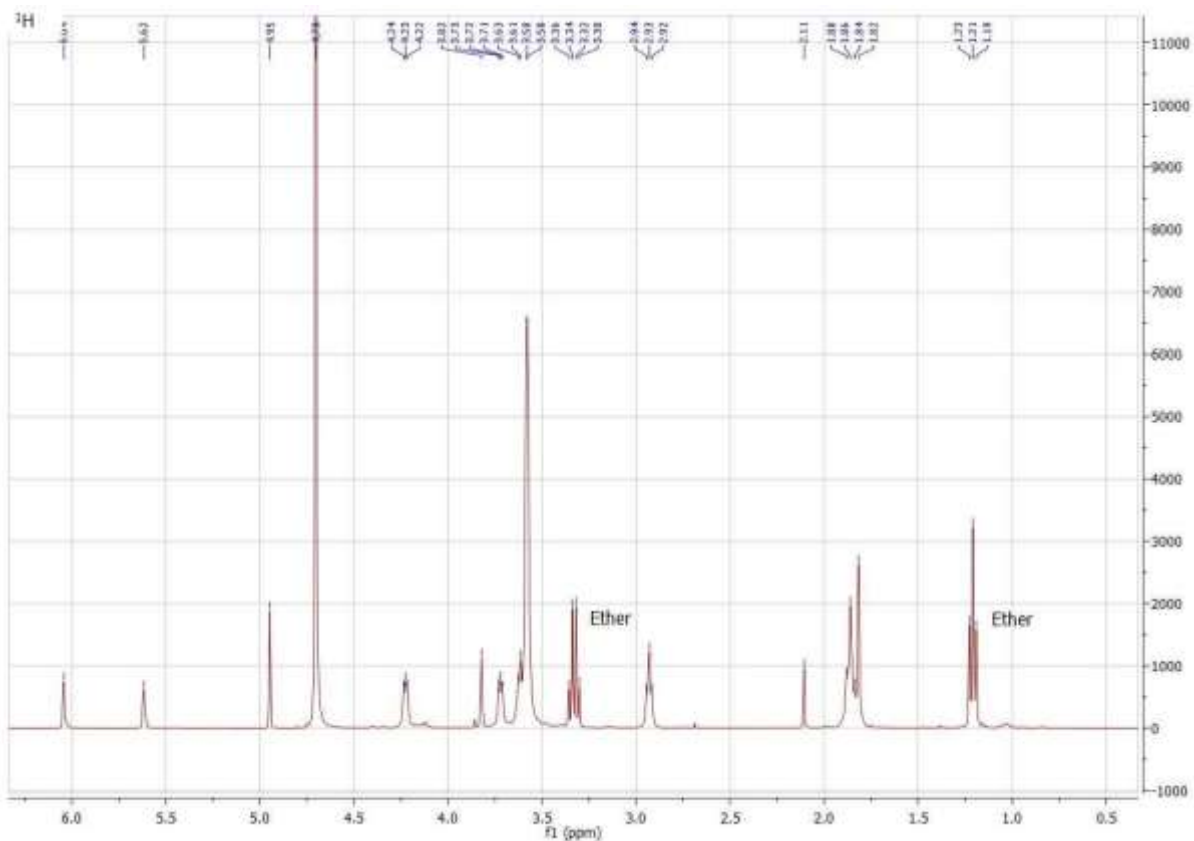


◆ 26-chloro-26-oxo-3,6,9,12,15,18,21,24-octaaxahexacosyl methacrylate **9b**

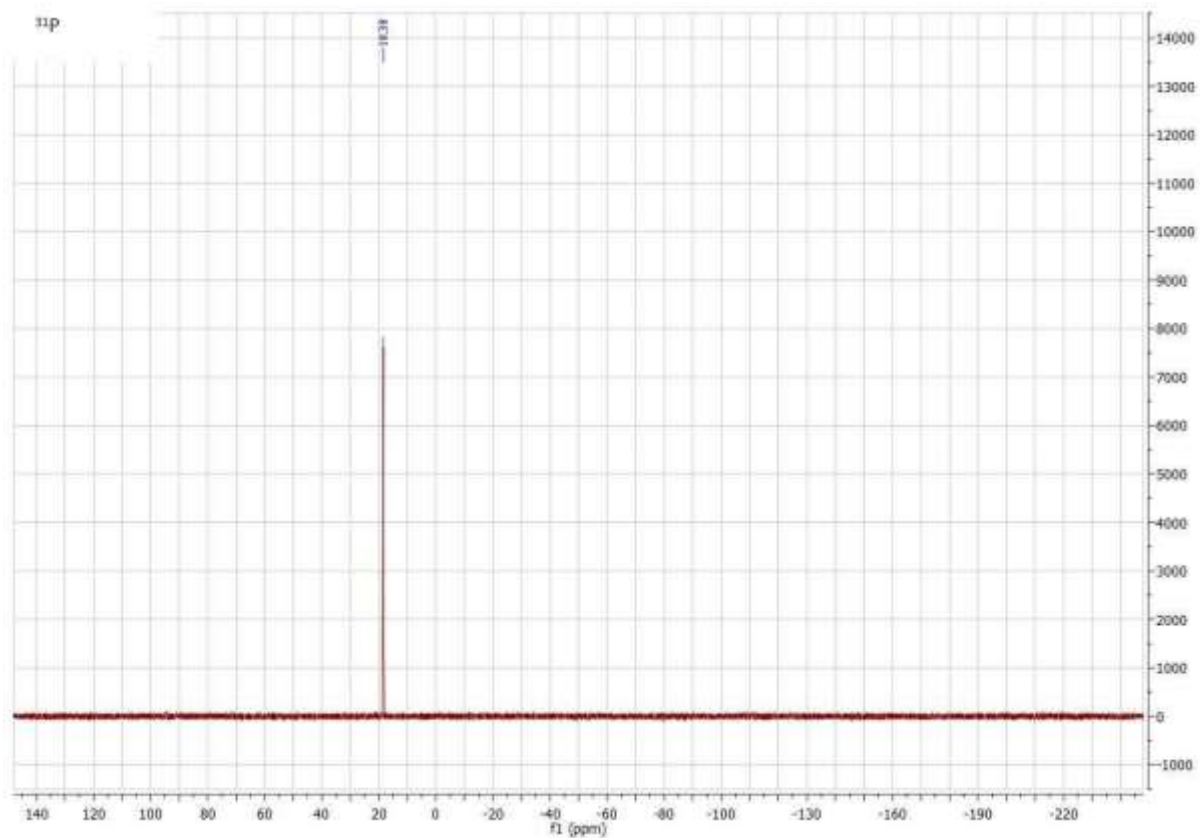
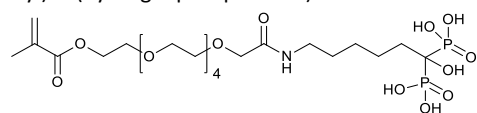


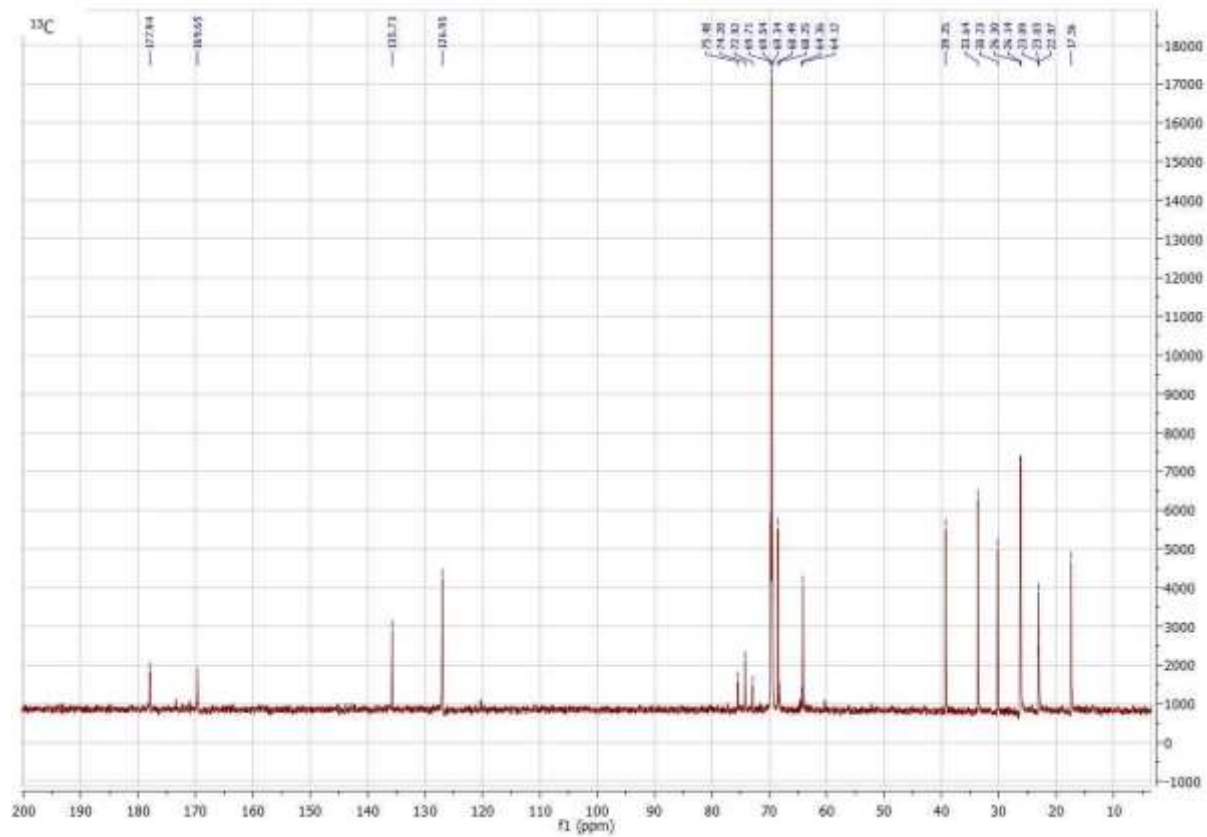
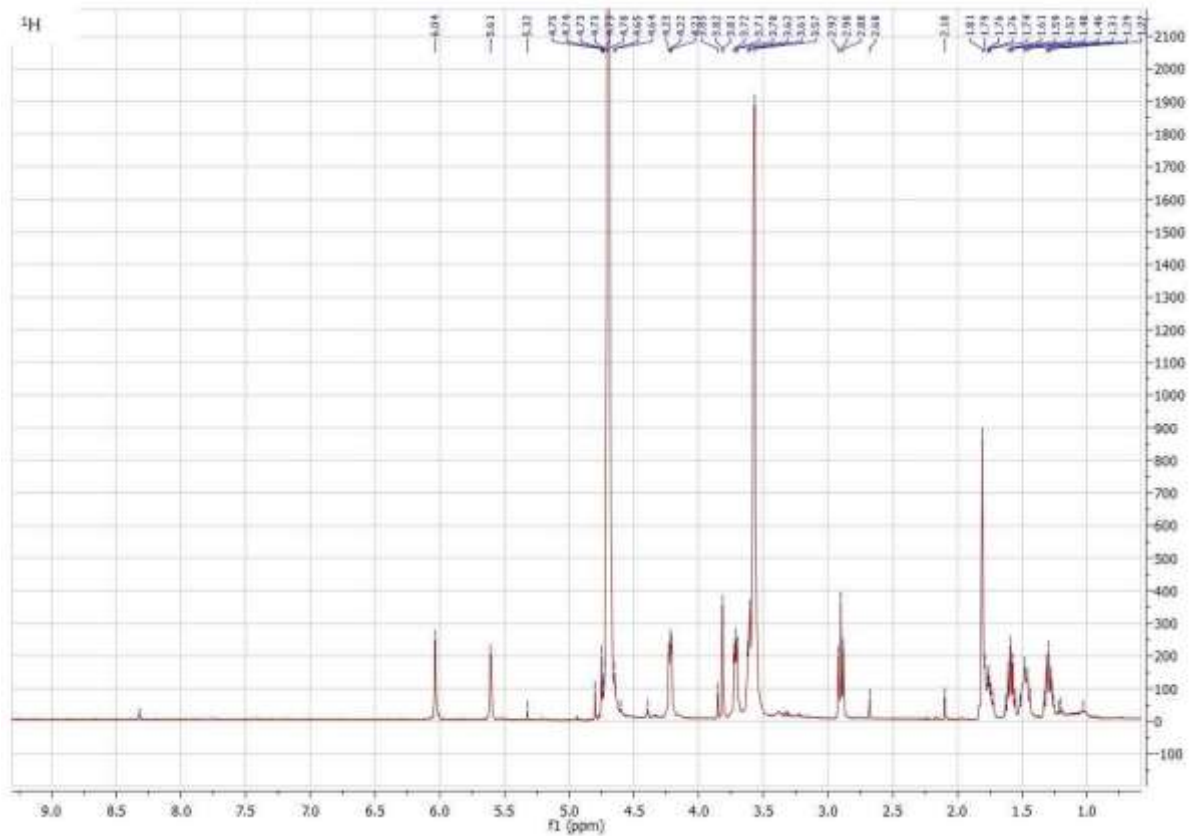
◆ Disodium salt of (26-hydroxy-2-methyl-3,21-dioxo-4,7,10,13,16,19-hexaoxa-22-azahexacos-1-ene-26,26-diyl)bis(hydrogenphosphonate) **1h**



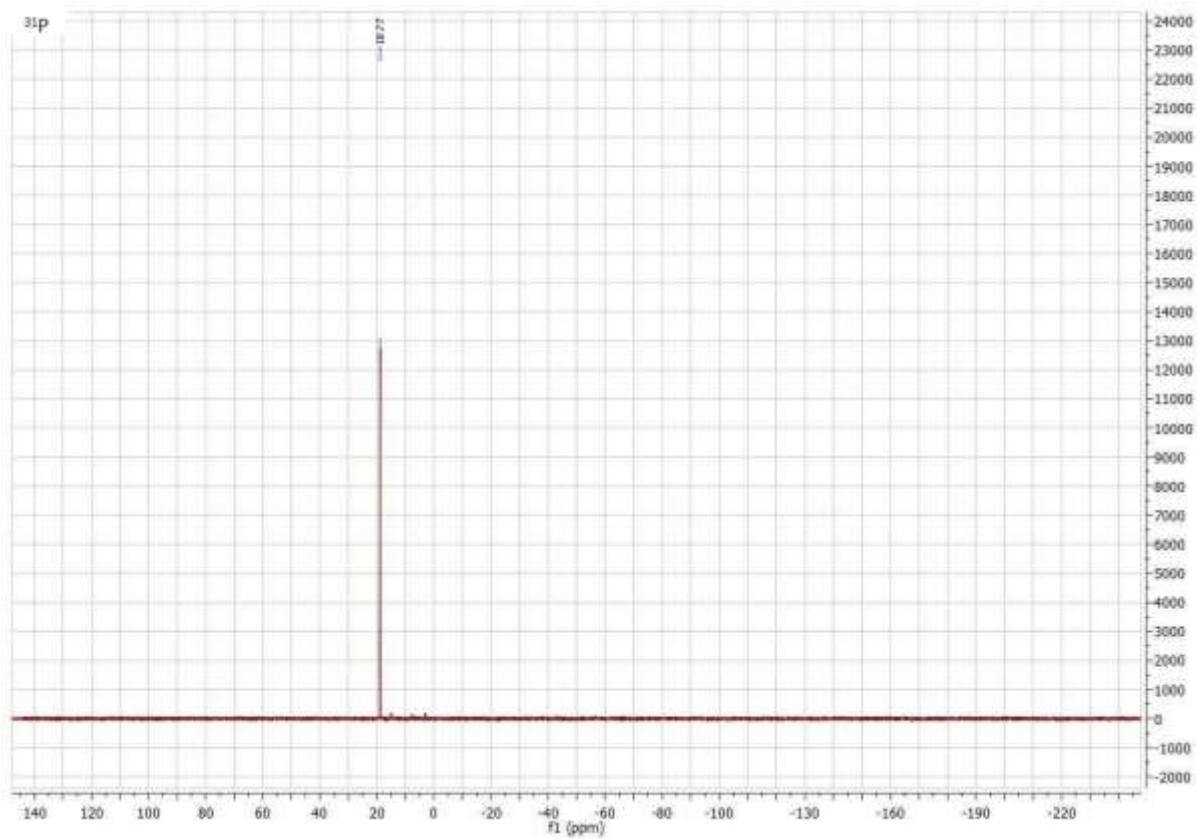
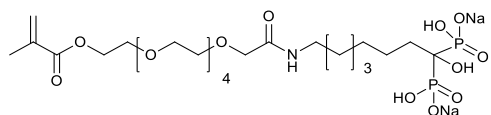


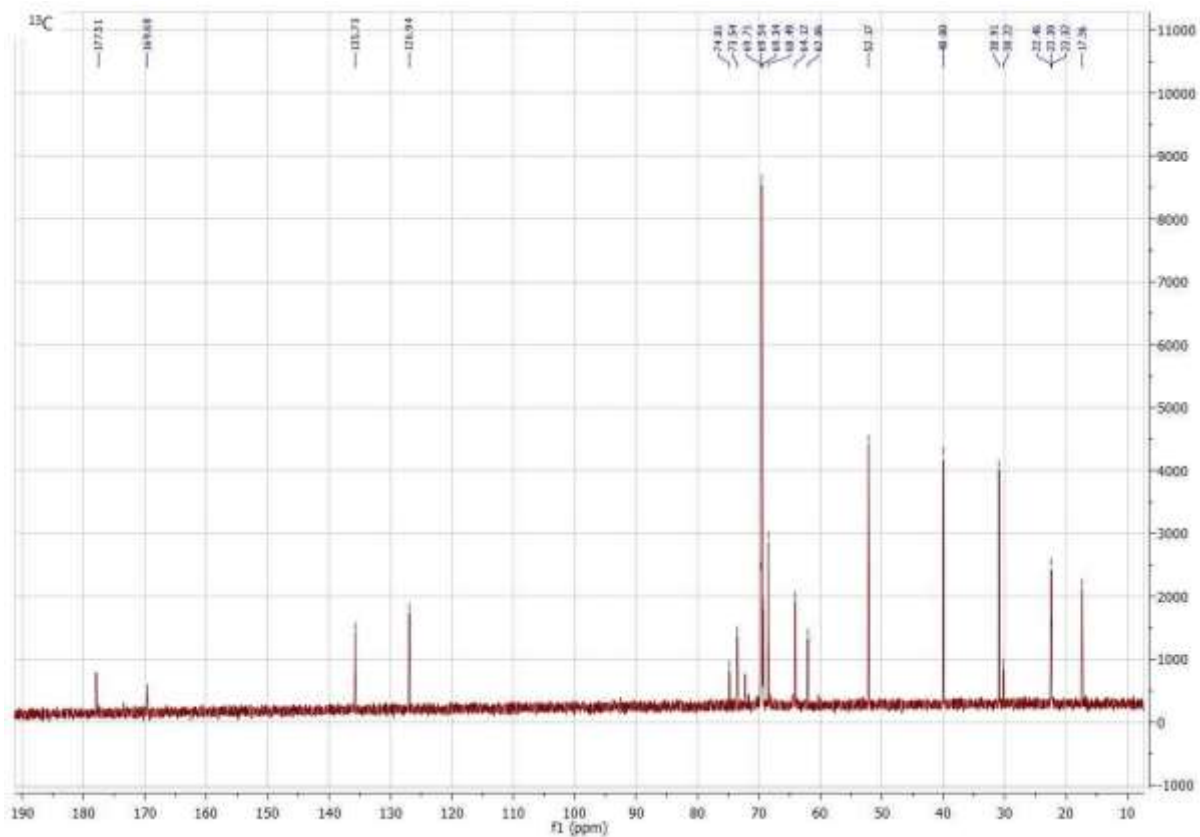
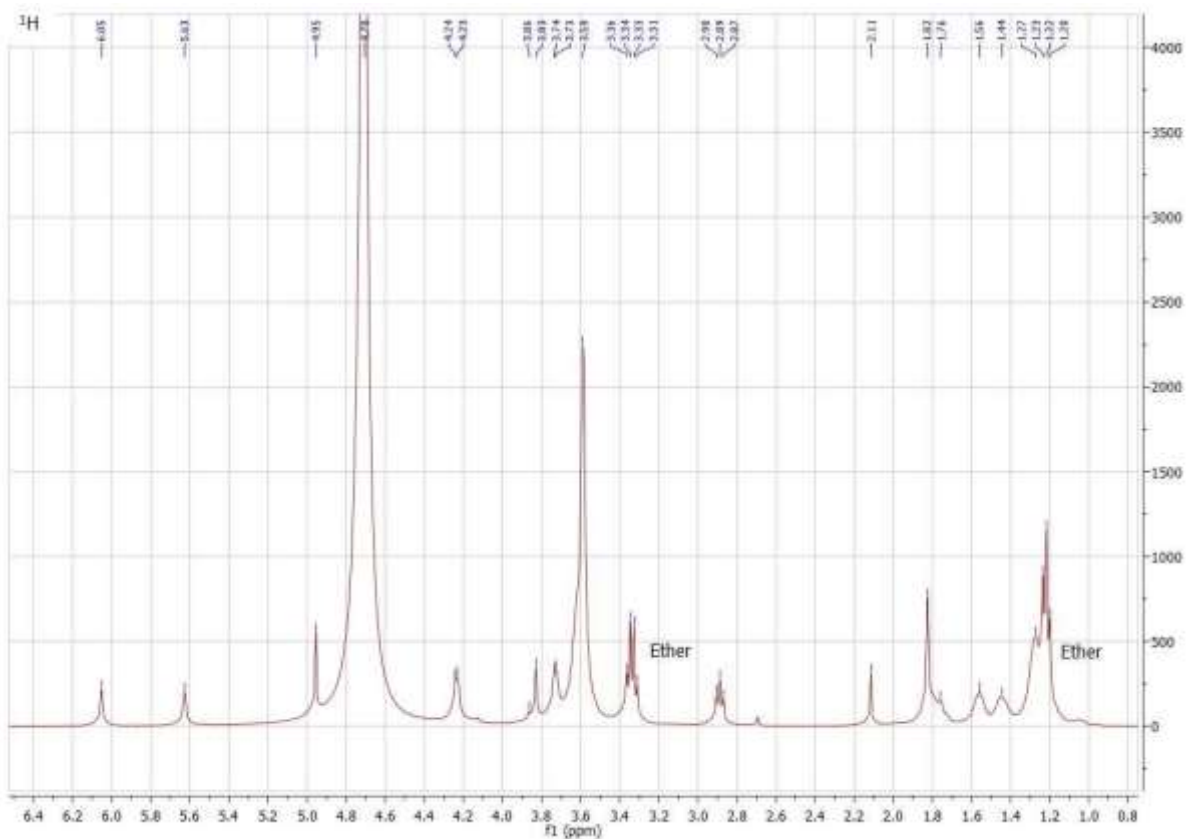
◆ Disodium salt of (28-hydroxy-2-methyl-3,21-dioxo-4,7,10,13,16,19-hexaoxa-22-azaococos-1-ene-28,28-diyl)bis(hydrogenphosphonate) li



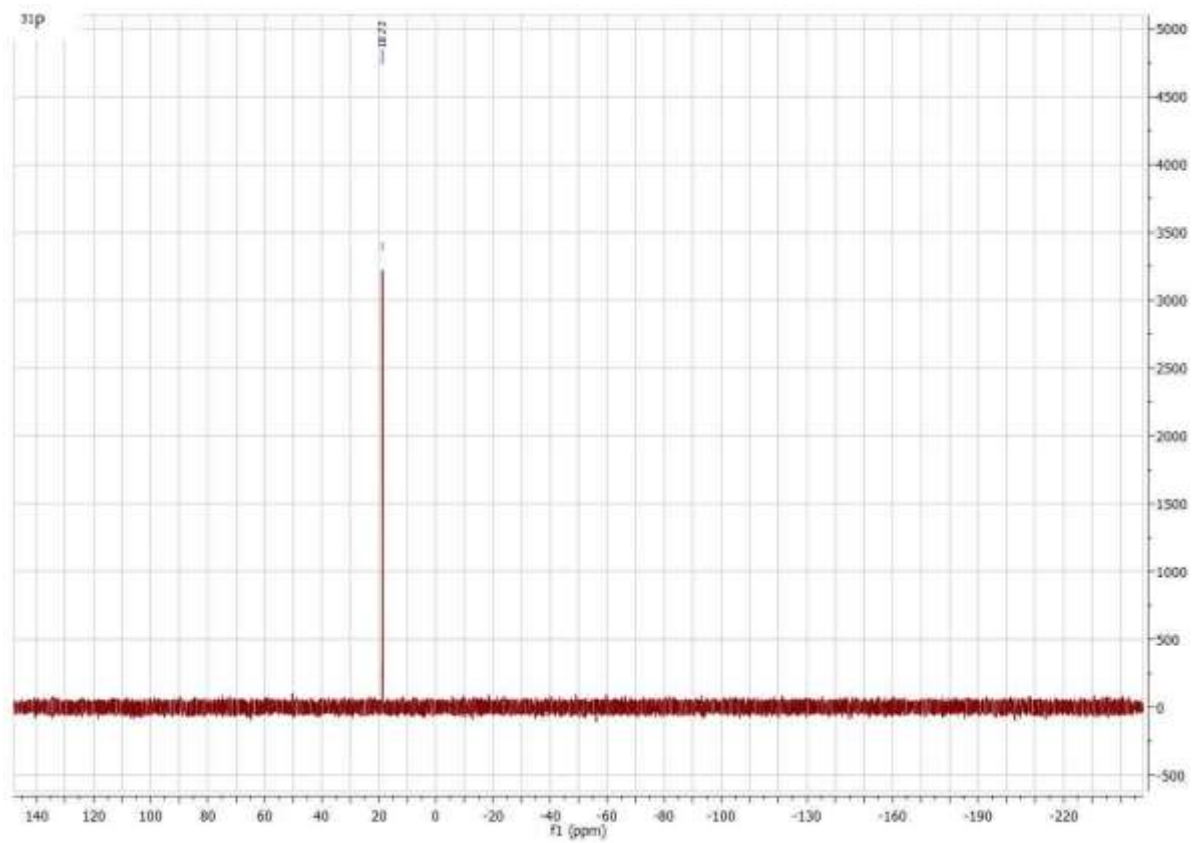
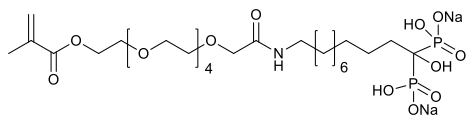


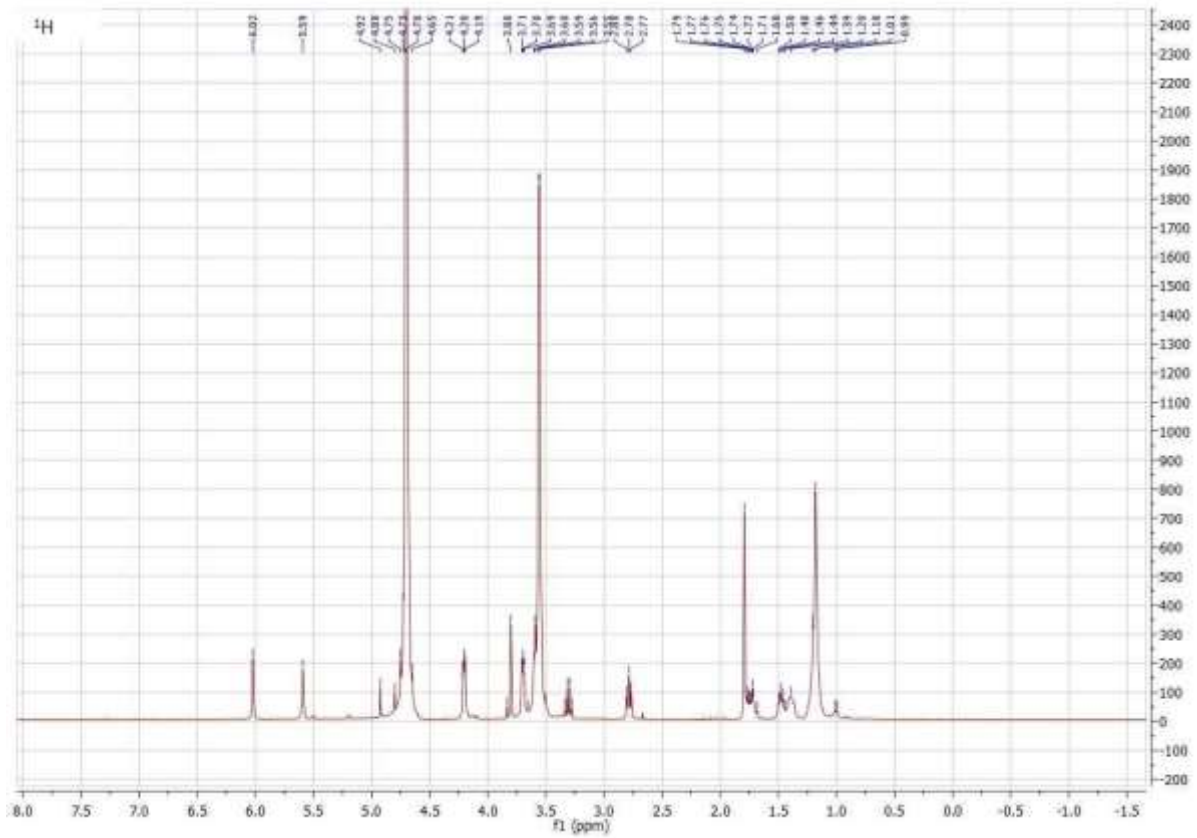
◆ Disodium salt of (30-hydroxy-2-methyl-3,21-dioxo-4,7,10,13,16,19-hexaoxa-22-azatriacont-1-ene-30,30-diyl)bis(hydrogenphosphonate) Ij

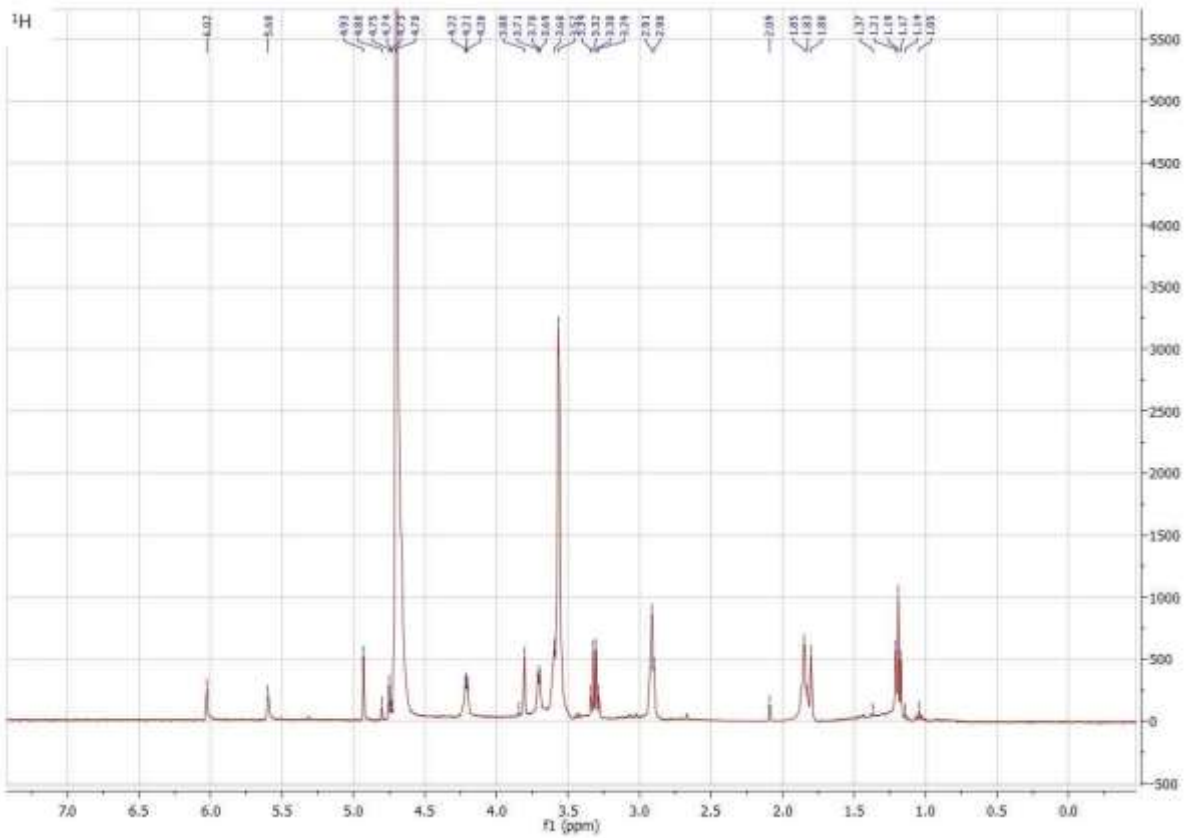


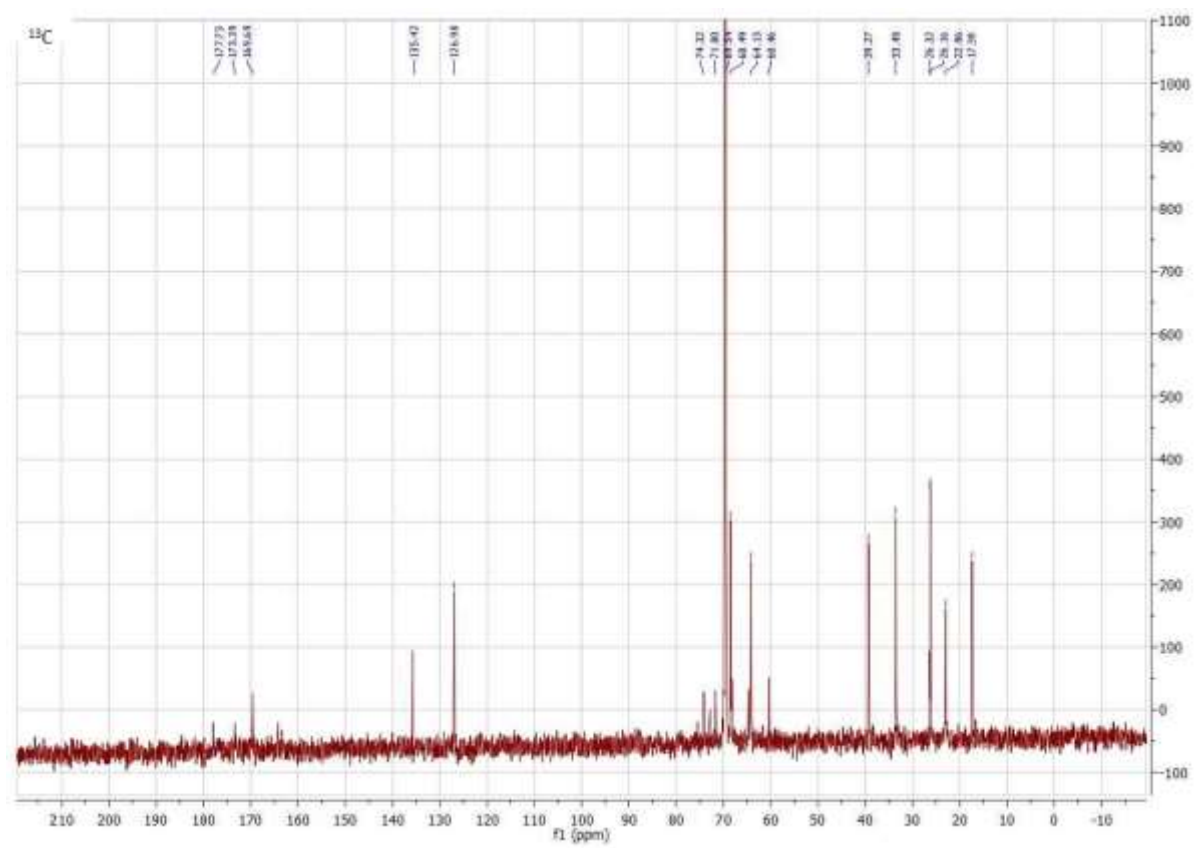
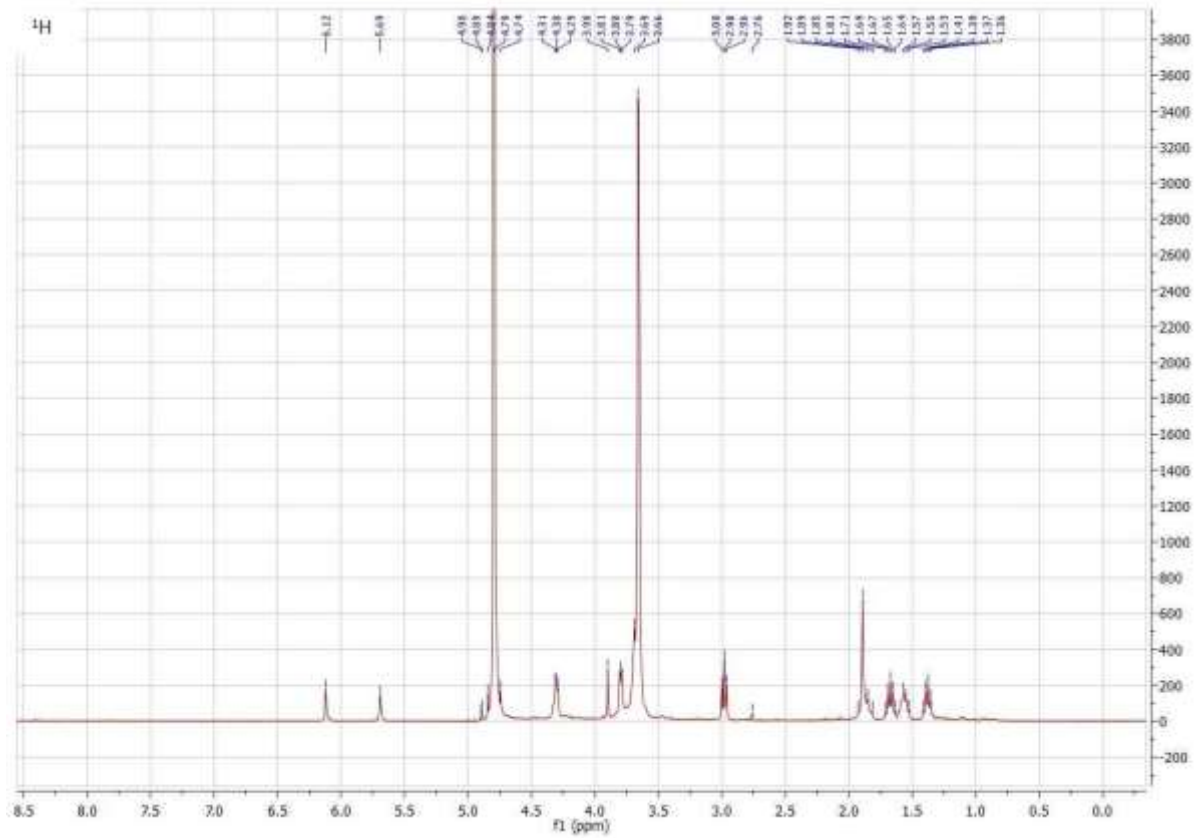


◆ Disodium salt of (33-hydroxy-2-methyl-3,21-dioxo-4,7,10,13,16,19-hexaoxa-22-azatritriacont-1-ene-33,33-diyl)bis(hydrogenphosphonate) **1k**

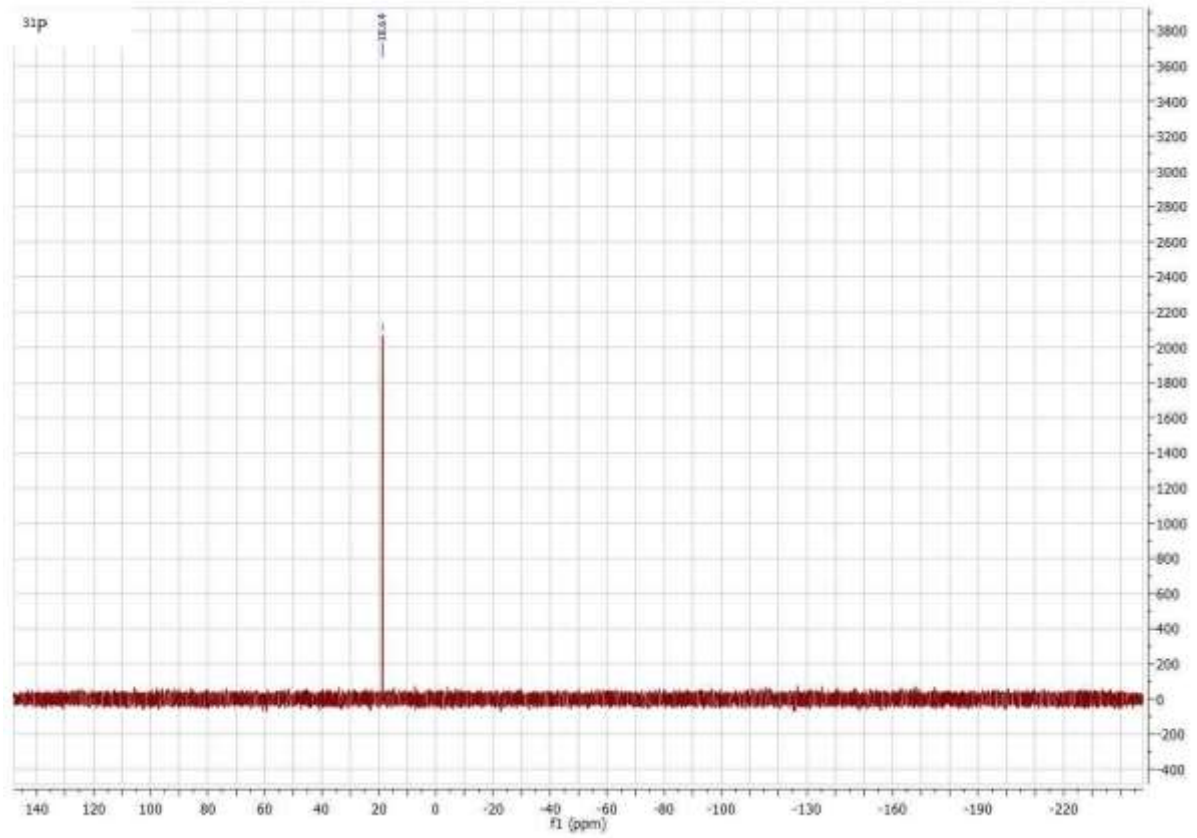
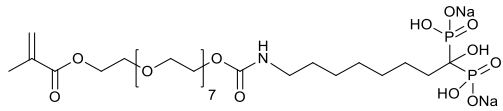


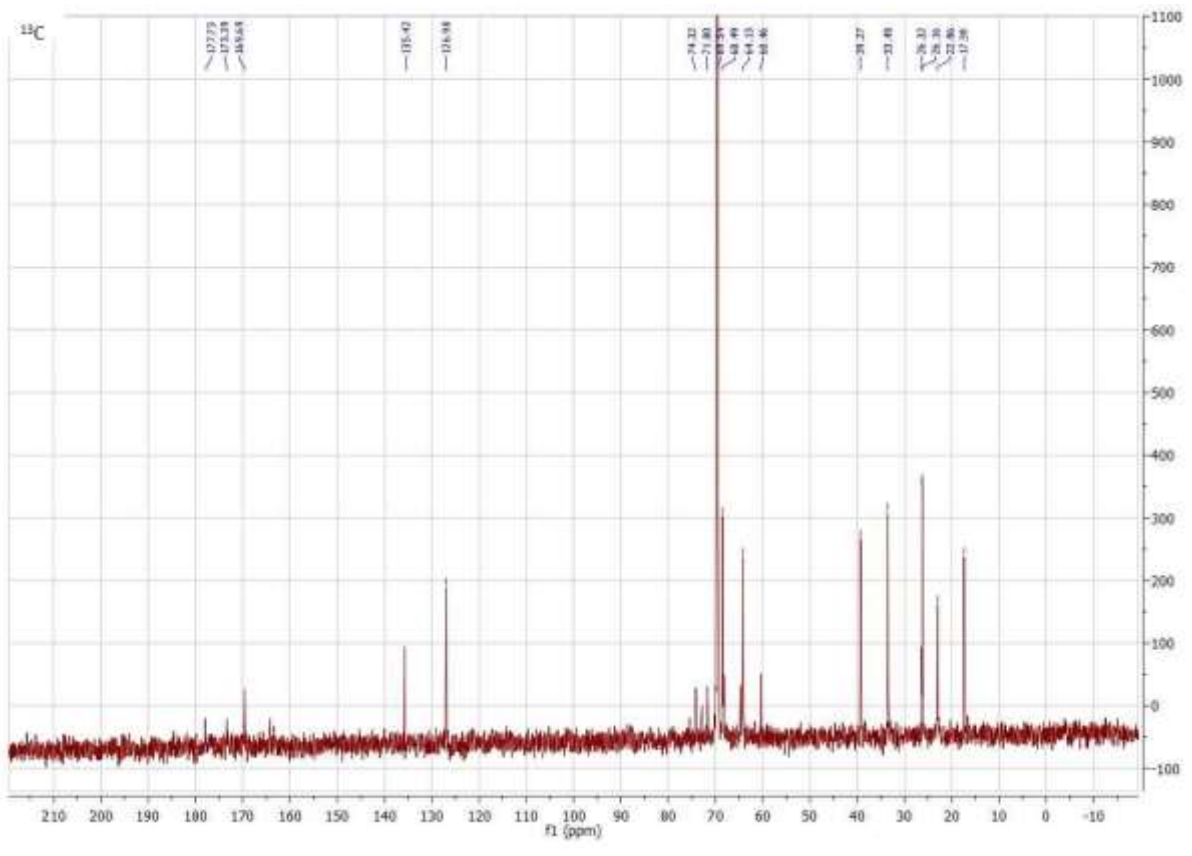
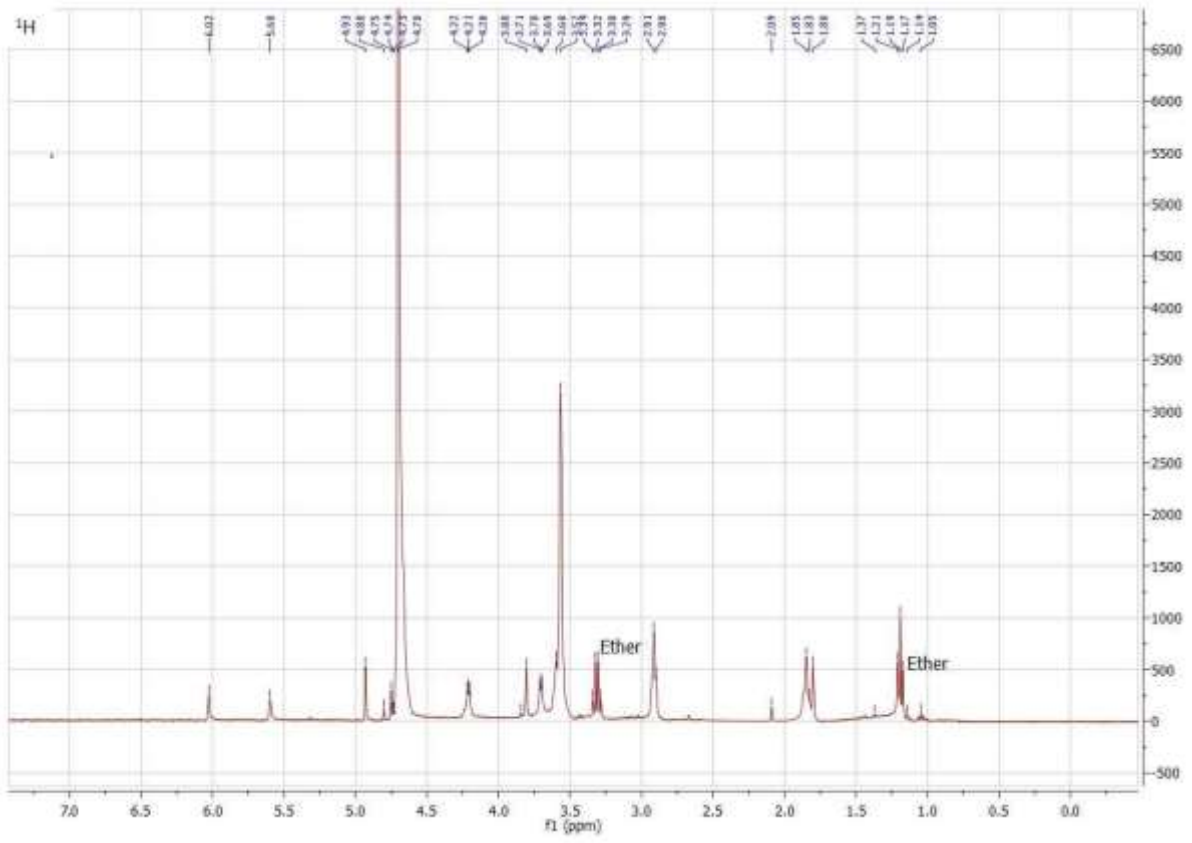






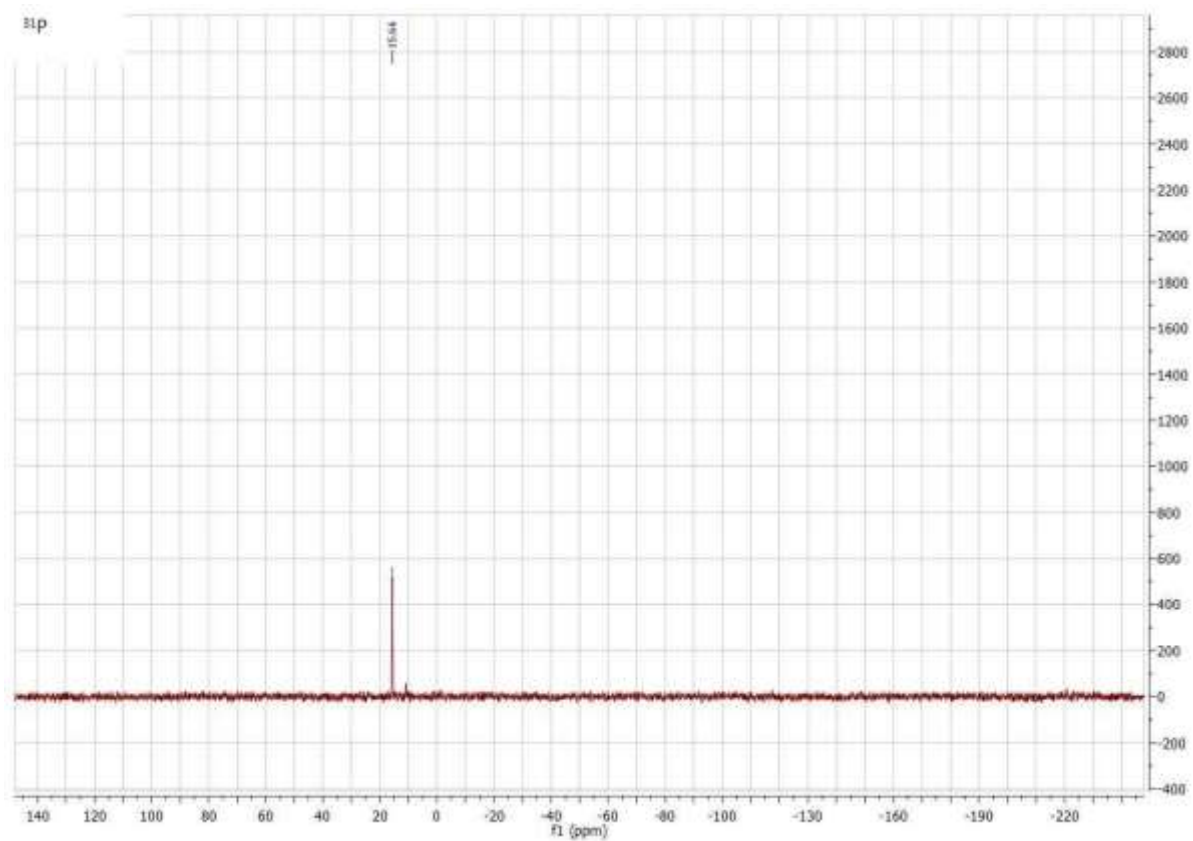
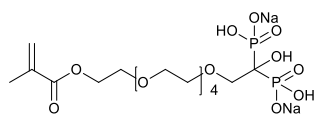
◆ Disodium salt of (21-hydroxy-2-methyl-3,12-dioxo-4,7,10-trioxa-13-azahenicos-1-ene-21,21-diyl)bis(hydrogenphosphonate) **1o**

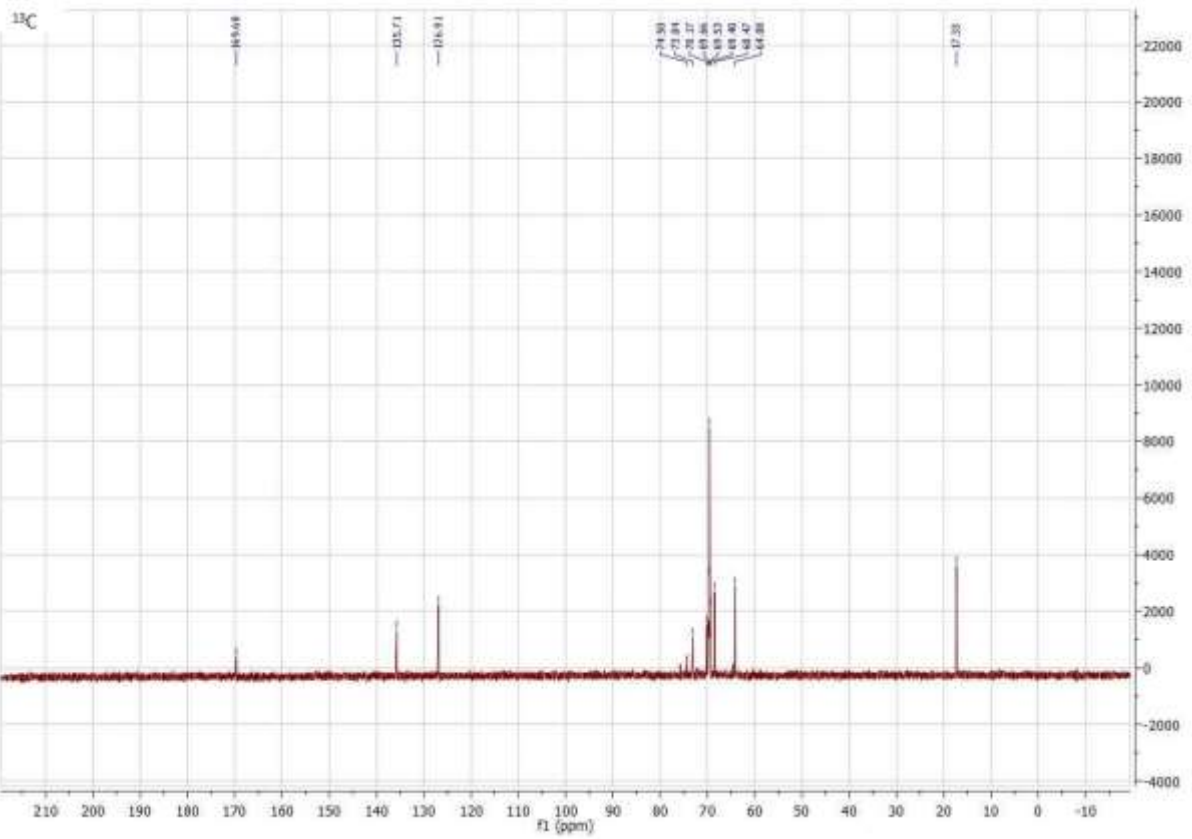
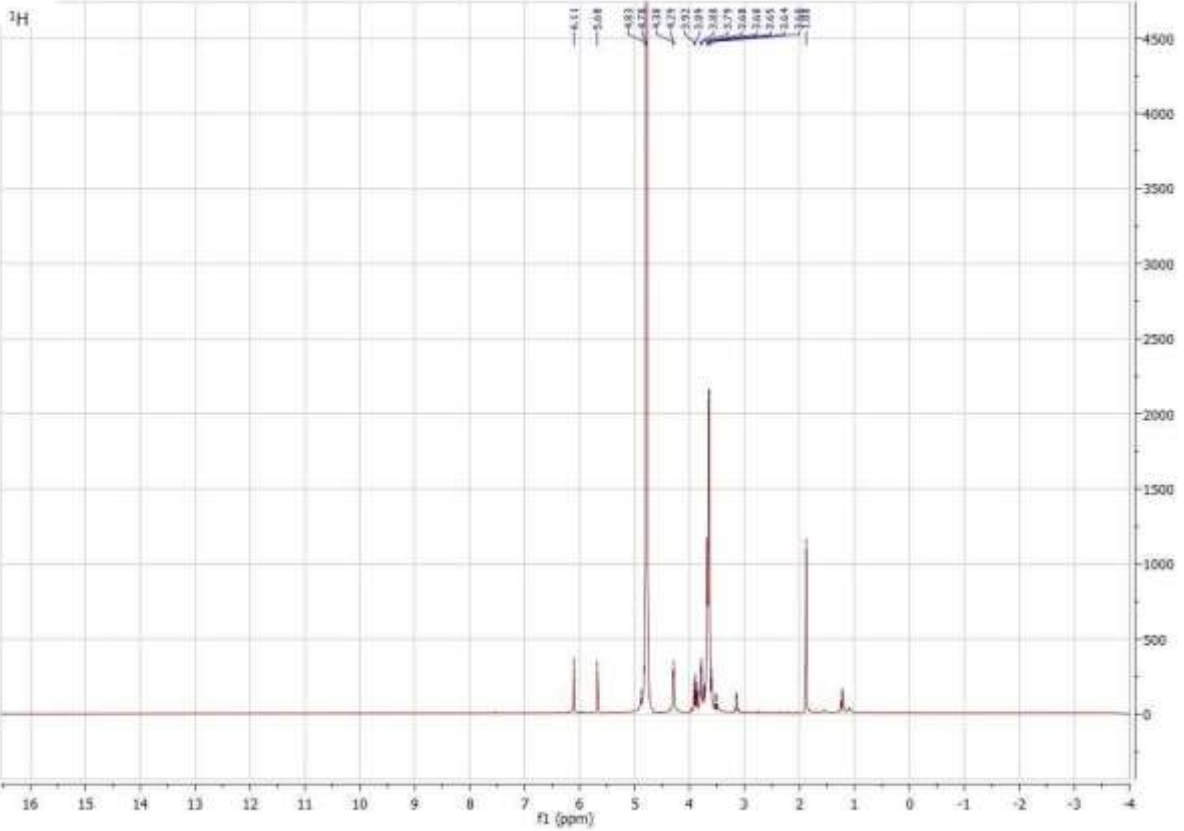




4) Synthesis of acrylic ester bisphosphonates Ip-q

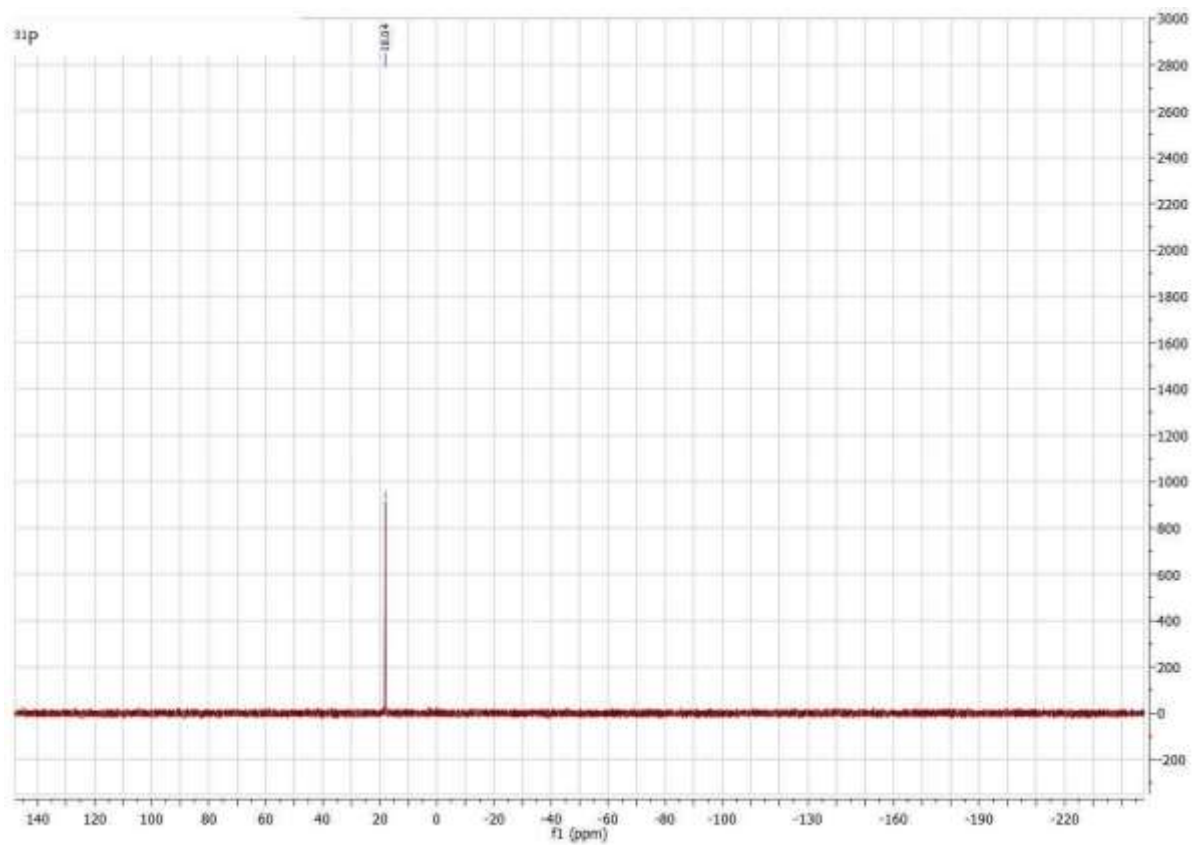
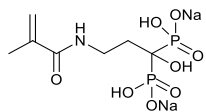
◆ Disodium salt of (1-hydroxy-20-methyl-19-oxo-3,6,9,12,15,18-hexaoxahenicos-20-ene-1,1-diyl)bis(hydrogenphosphonate)
Ip



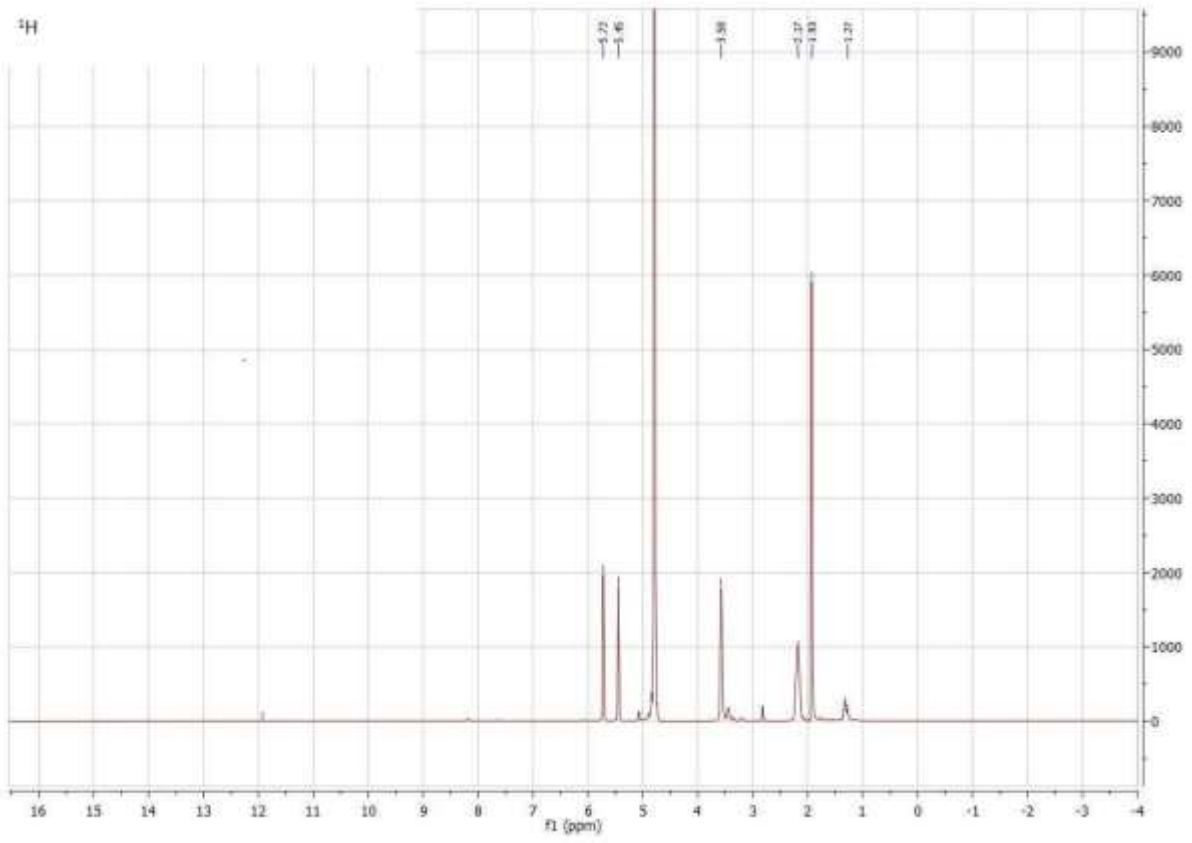


5) Synthesis of acrylamide bisphosphonates IIa-e

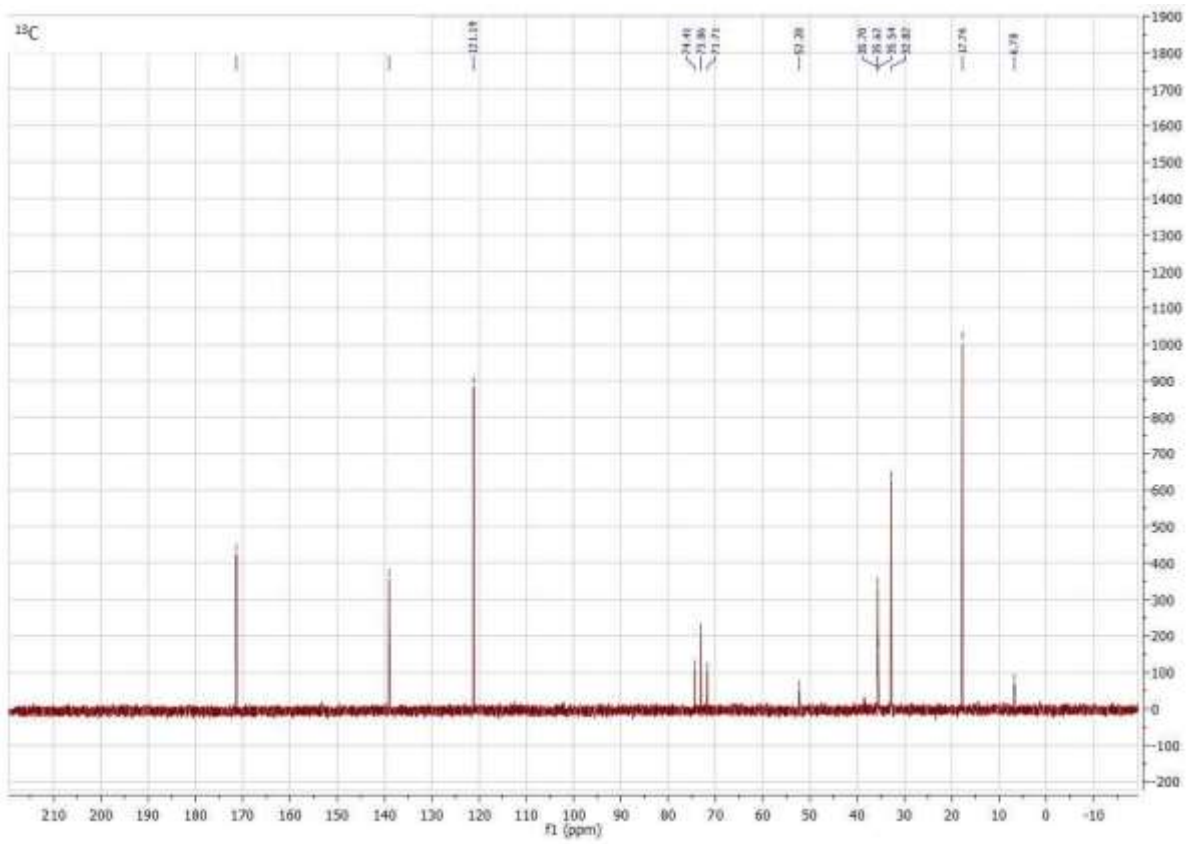
◆ Disodium salt of (1-hydroxy-3-methacrylamidopropane-1,1-diyl)bis(hydrogenphosphonate) **IIa**



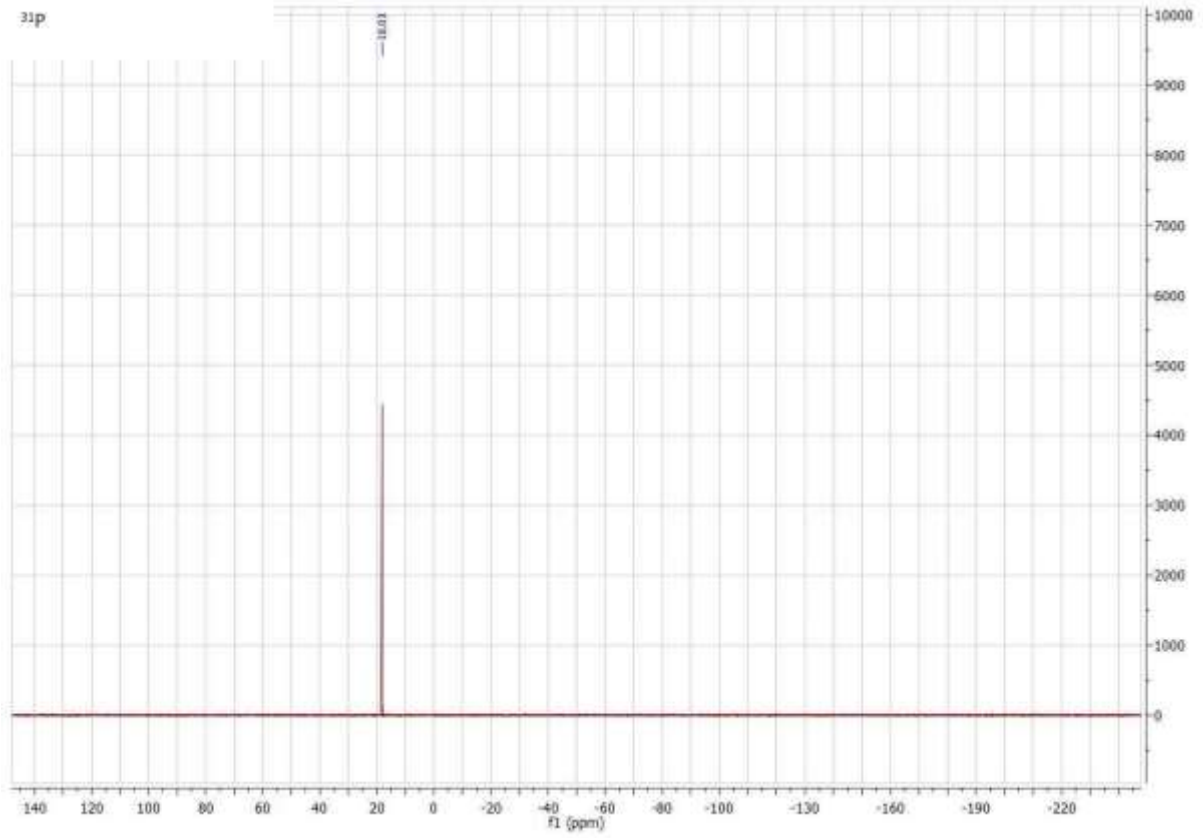
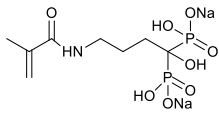
¹H

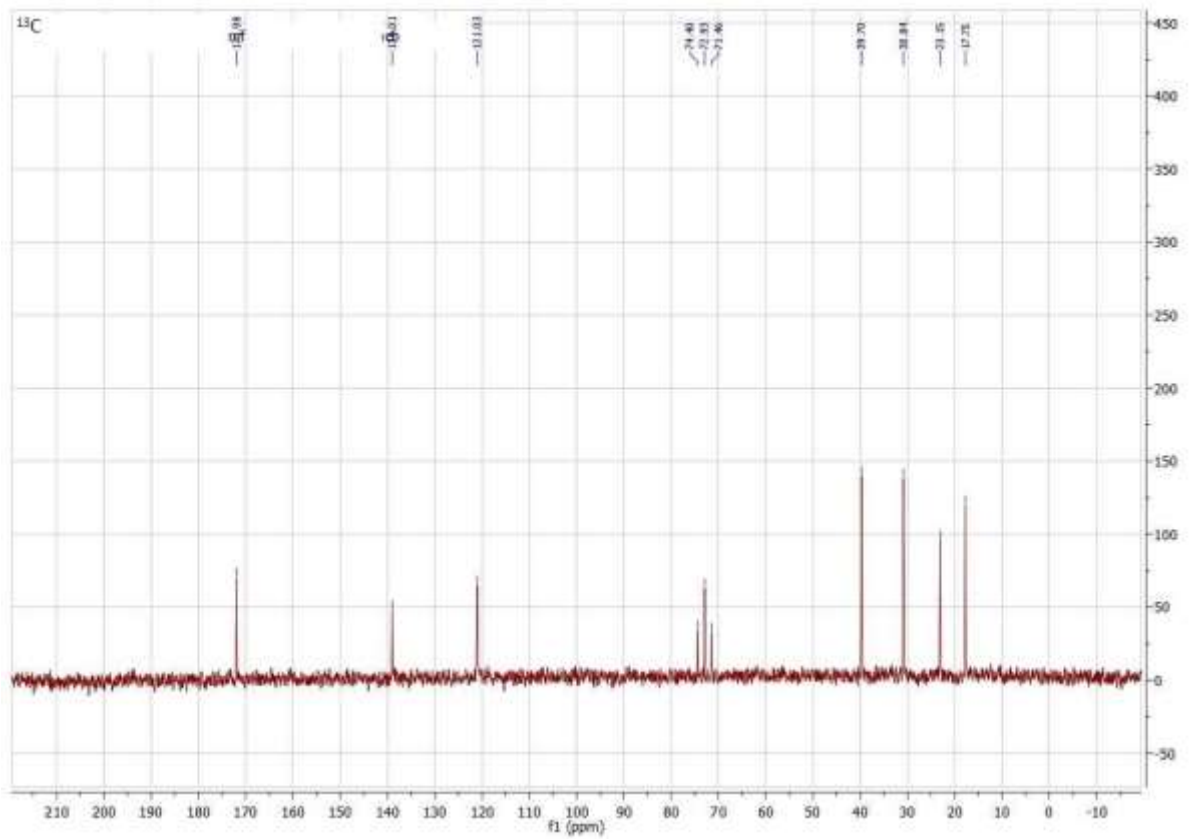
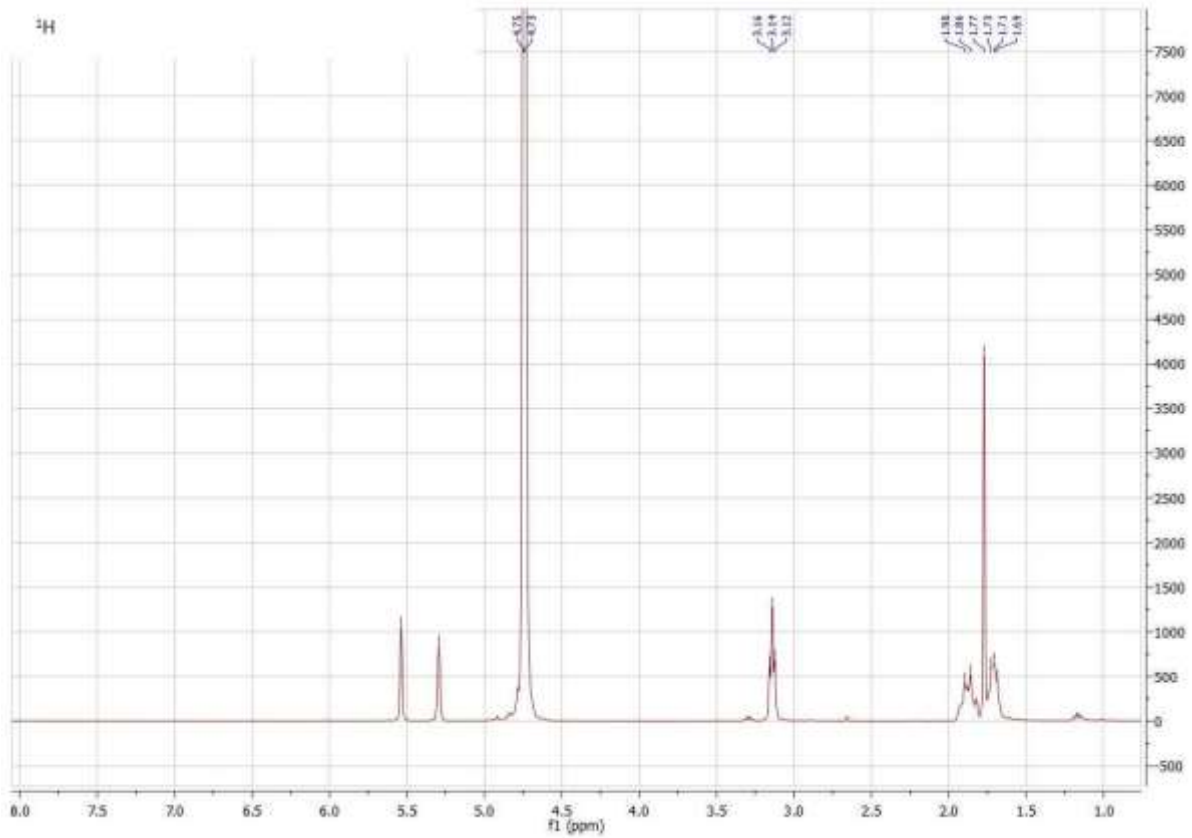


¹³C

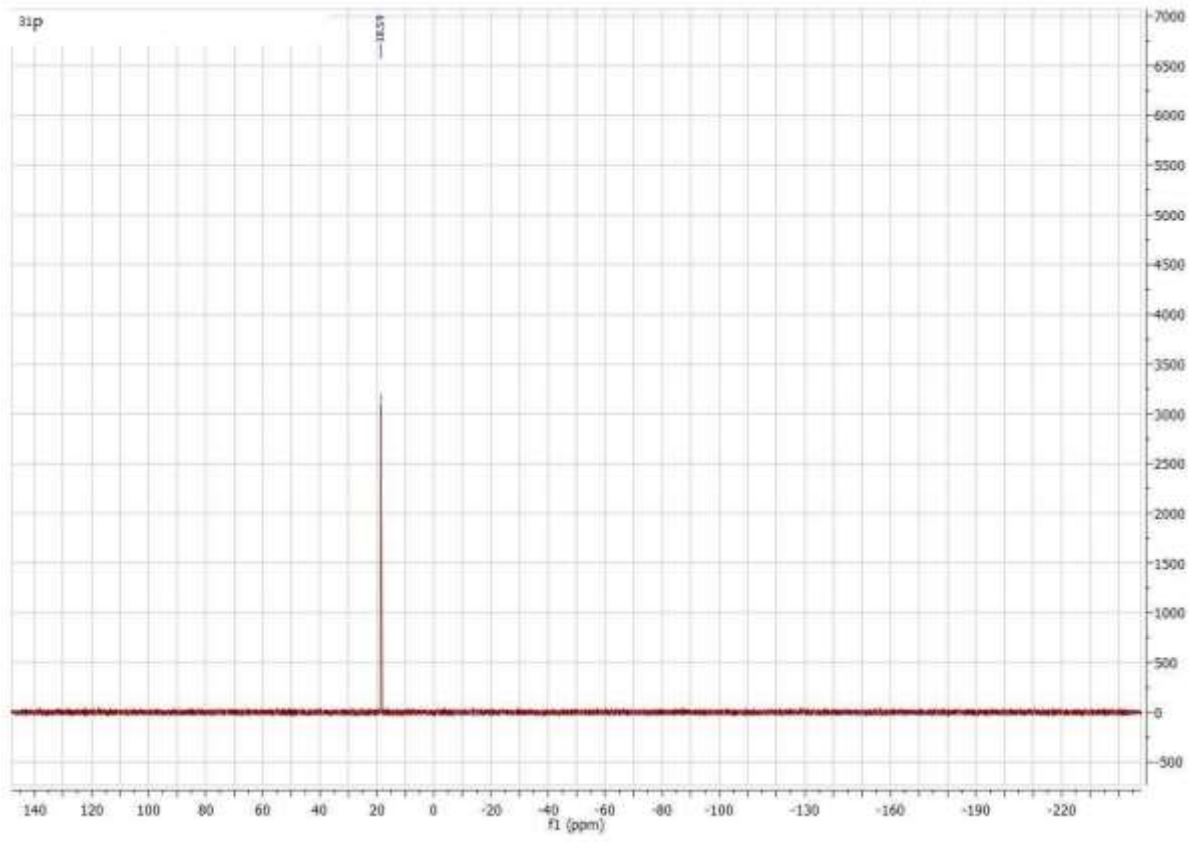
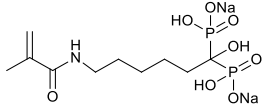


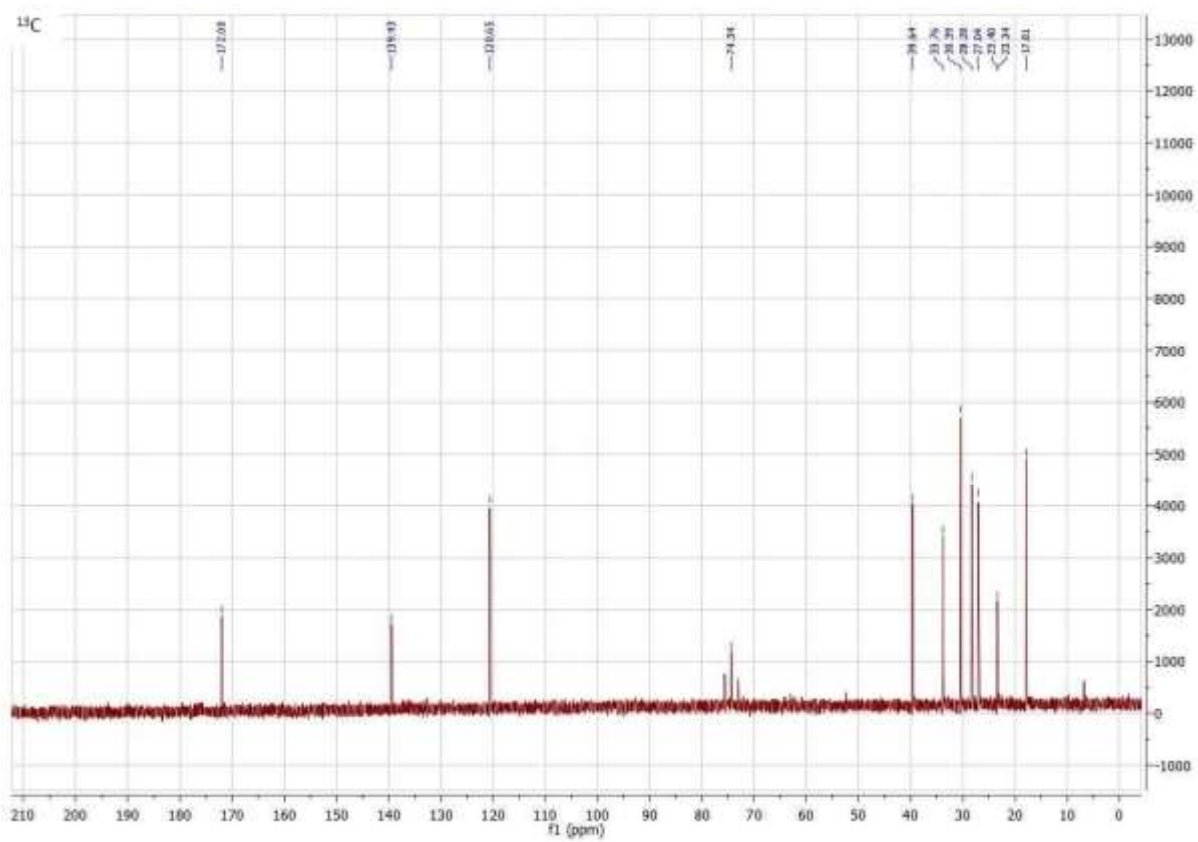
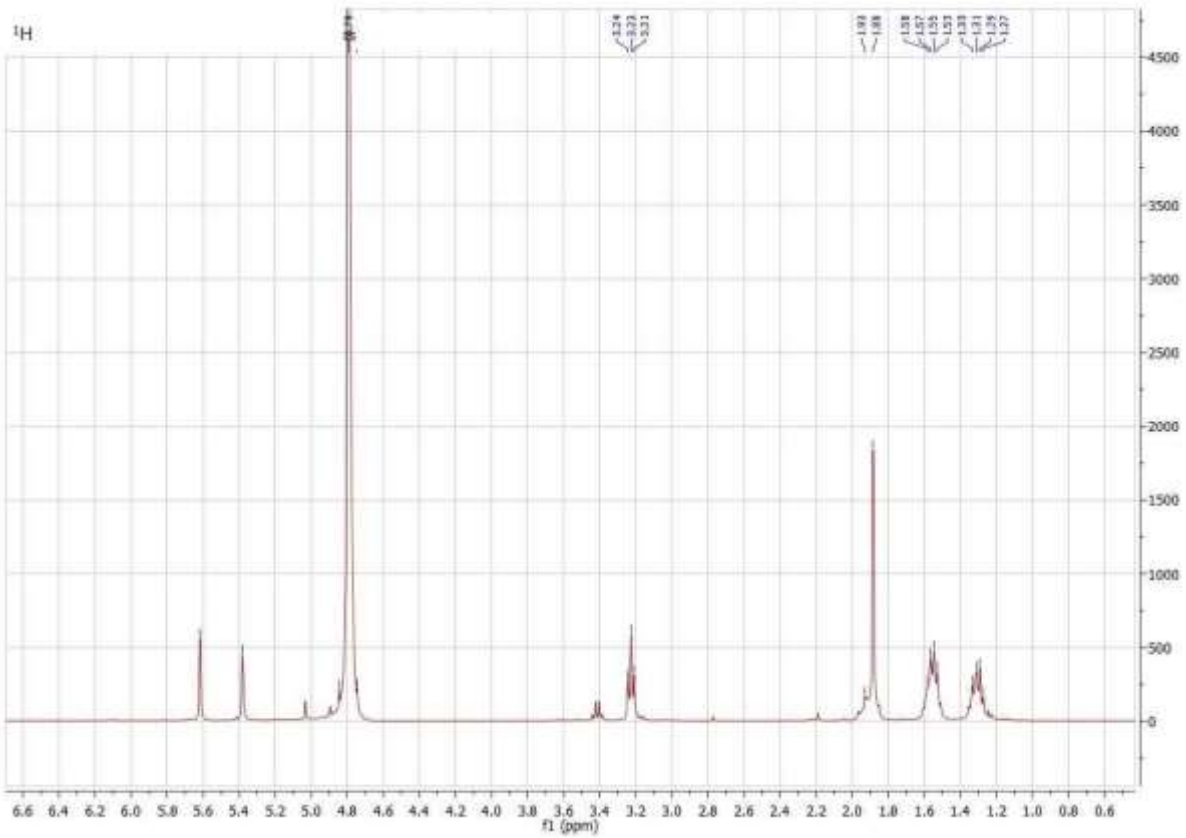
◆ Disodium salt of (1-hydroxy-4-methacrylamidobutane-1,1-diyl)bis(hydrogenphosphonate) **IIb**



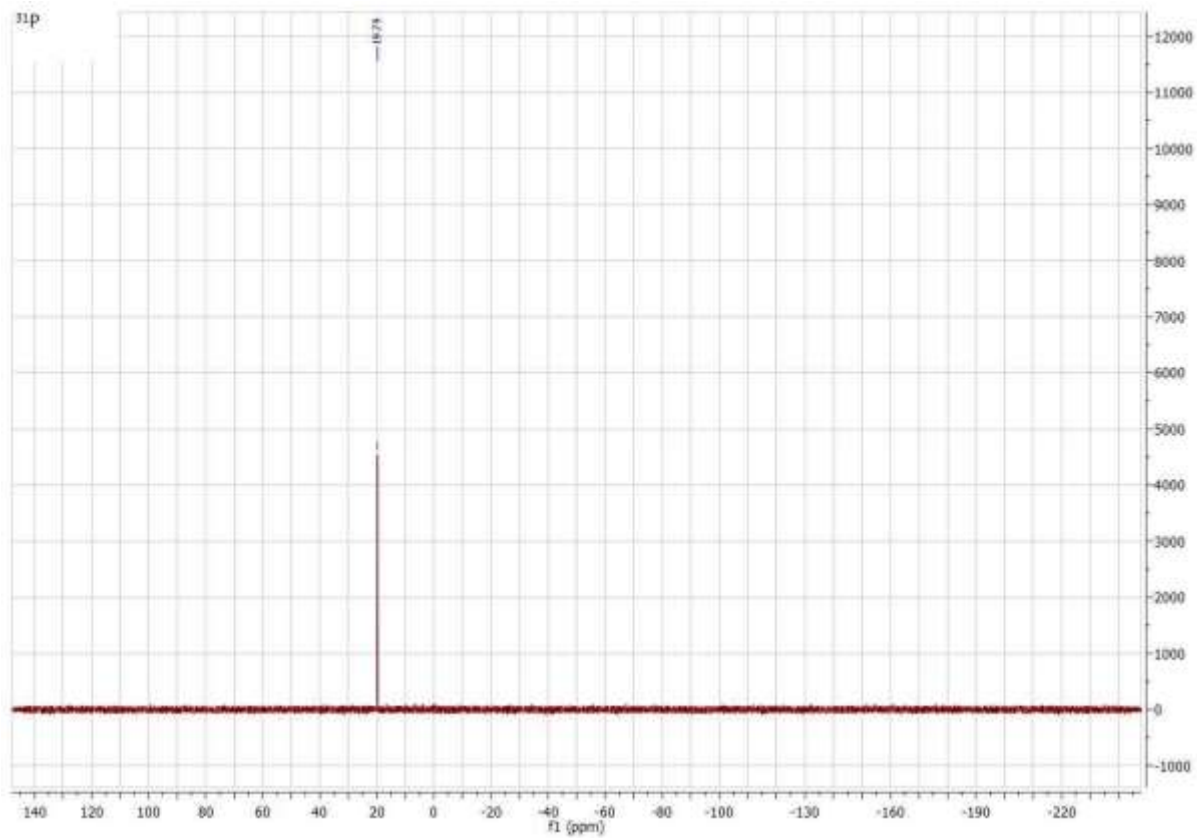
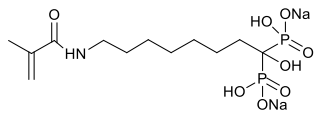


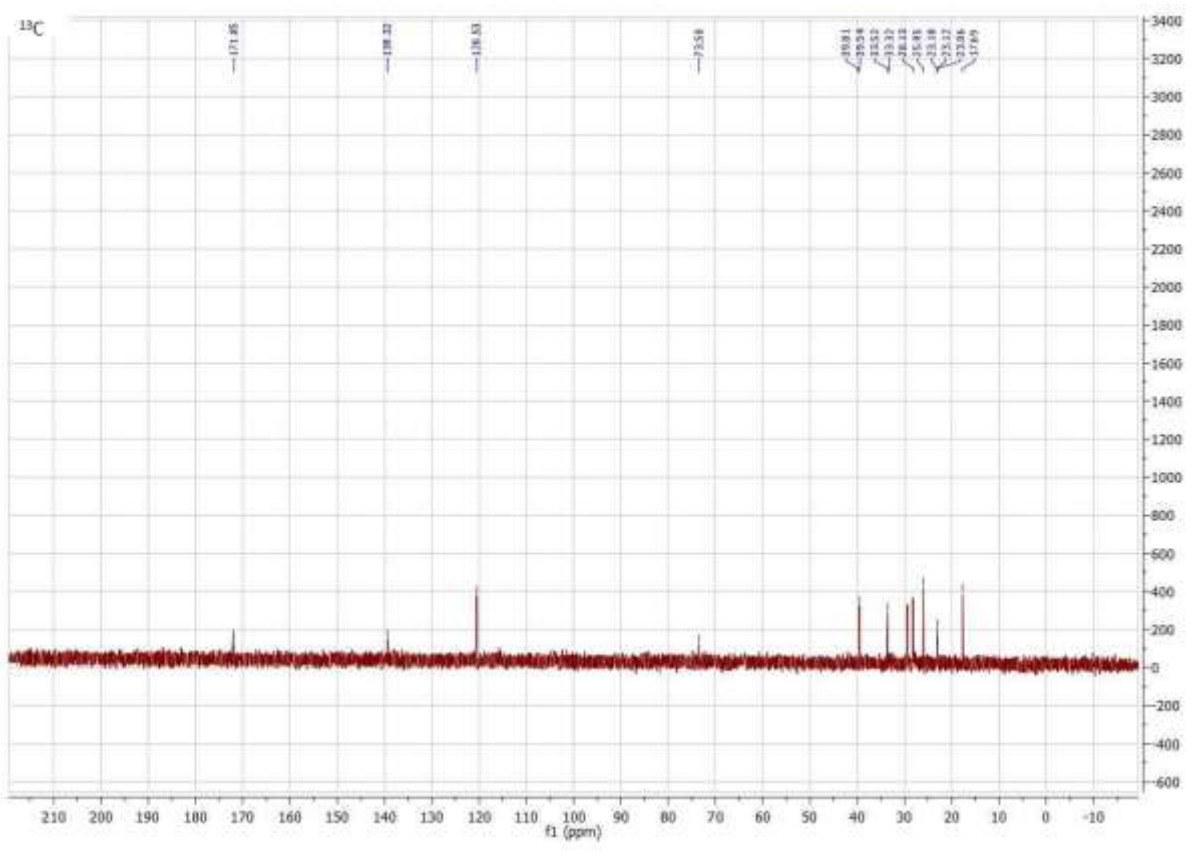
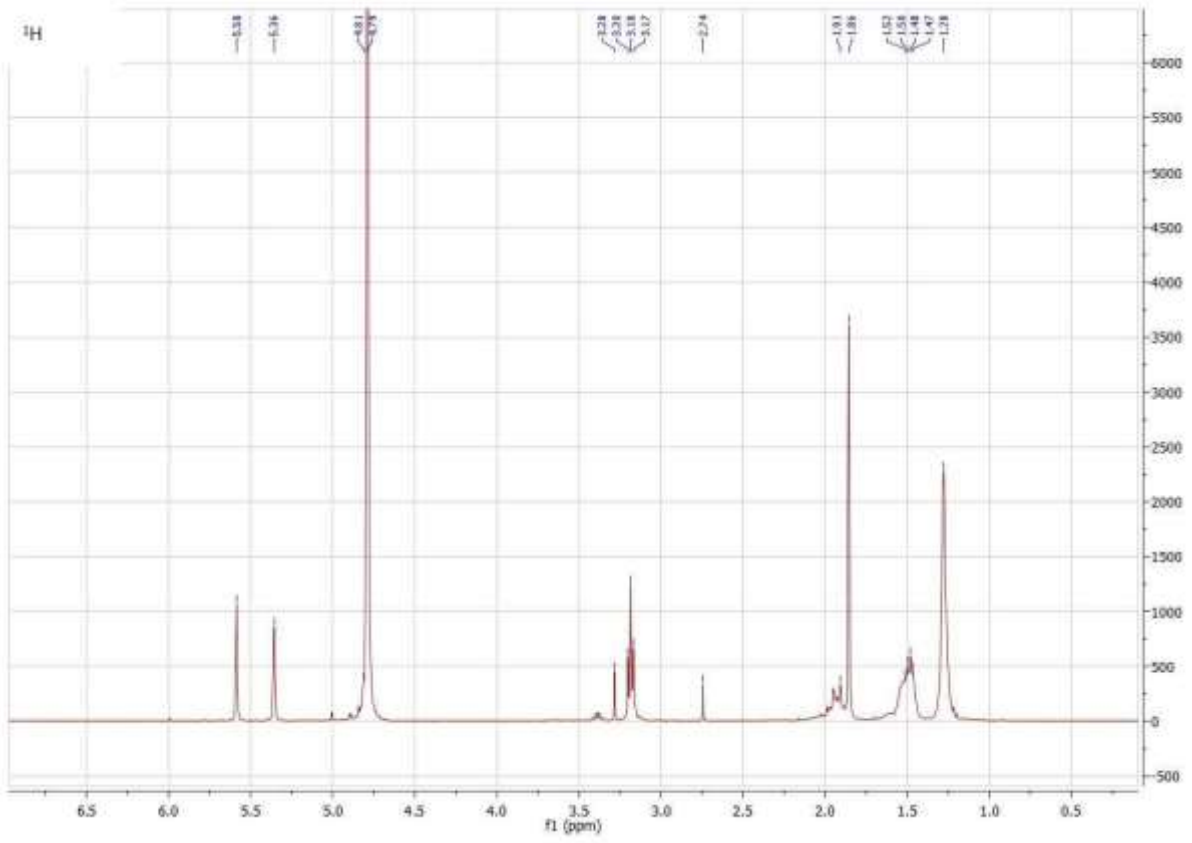
◆ Disodium salt of (1-hydroxy-4-methacrylamidobutane-1,1-diyl)bis(hydrogenphosphonate) **IIc**





◆ Disodium salt of (1-hydroxy-8-methacrylamidoctane-1,1-diyl)bis(hydrogenphosphonate) **lld**





◆ Disodium salt of (1-hydroxy-11-methacrylamidoundecane-1,1 diyl)bis(hydrogenphosphonate) IIe

