

Figure S1. MALDI MS² spectrum of the bis-phosphorylated tetra-acylated lipid A species at *m/z* 1301.8 from *S. salinus* M19-40^T R-LPS. Fragments assignment is reported. The proposed structure for the tetra-acylated lipid A species is reported in the inset.

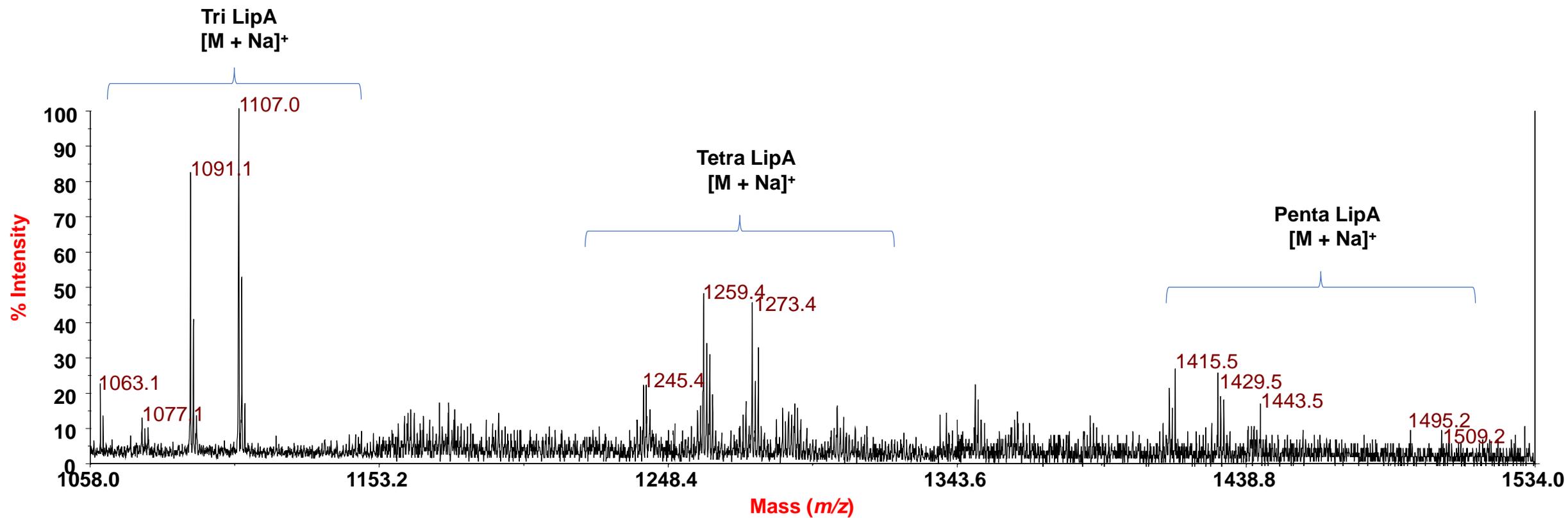


Figure S2. Section of the positive-ion MALDI mass spectrum of the lipid A from *S. salinus* M19-40^T R-LPS showing most of the lipid A species present with Na^+ counterions.

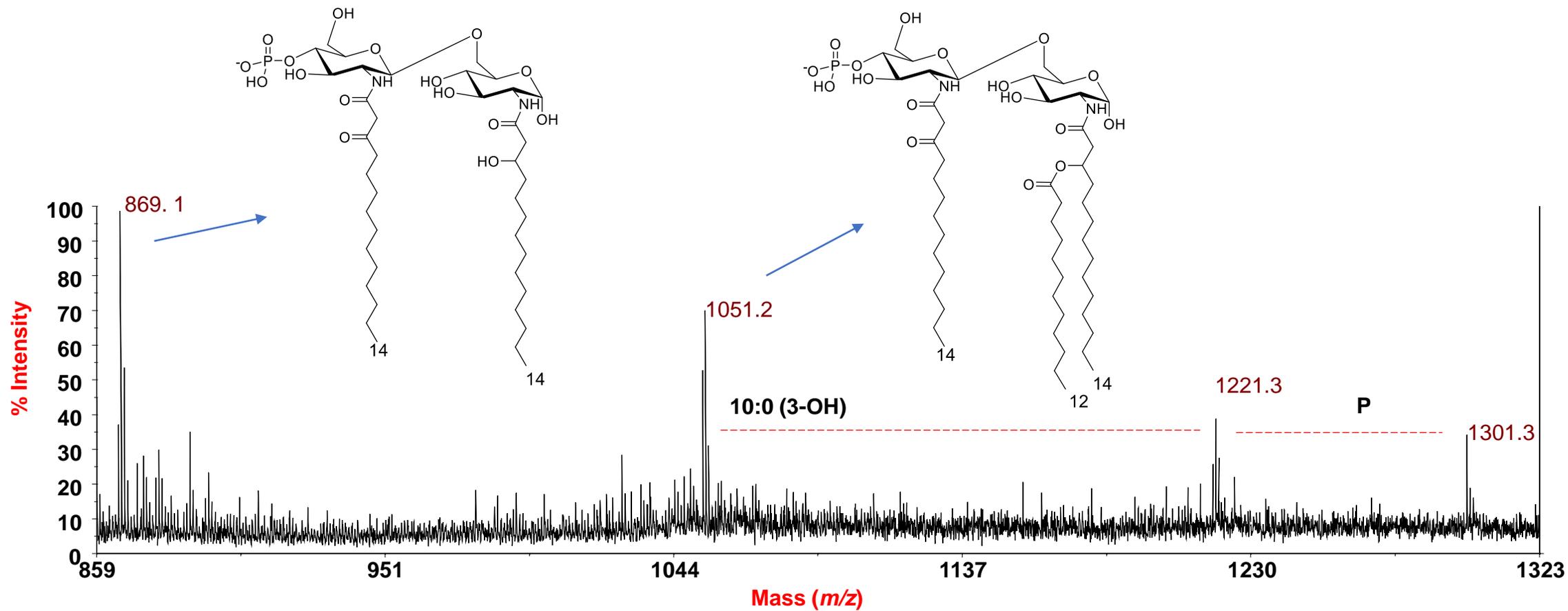


Figure S3. Negative-ion MALDI mass spectrum of the lipid A from *S. salinus* M19-40^T R-LPS obtained from 10 % ammonium hydroxide hydrolysis. The proposed structures of the product are reported in the figure.