

Supplementary Information

Improved Isolation Procedure for Azaspiracids from Shellfish, Structural
Elucidation of Azaspiracid-6 and Stability studies

Jane Kilcoyne^{†*}, Adela Keogh[†], Ger Clancy[†], Patricia LeBlanc[‡], Ian Burton[‡], Michael A. Quilliam[‡], Philipp Hess[§] and Christopher O. Miles[#]

[†]Marine Institute, Renville, Oranmore, Co. Galway, Ireland.

[‡]National Research Council, Institute for Marine Biosciences, 1411 Oxford Street, Halifax, Nova Scotia, Canada.

[§]IFREMER, Research Unit Environment Microbiology and Phycotoxins, Rue de l'Ile d'Yeu, 44311 Nantes, France.

[#]Norwegian Veterinary Institute, P.O. Box 750 Sentrum, 0106 Oslo, Norway.

*Corresponding author. Tel: + 353 913872376. Email: jane.kilcoyne@marine.ie

Figure S1. ^1H NMR spectrum of azaspiracid-6 (6).....	S3
Figure S2. Structure of azaspiracid-6 (6) showing ^1H and ^{13}C chemical shifts and COSY correlations.....	S4
Figure S3. Structure of azaspiracid-6 (6) showing ^1H and ^{13}C chemical shifts and HMBC correlations.....	S5
Figure S4. Structure of azaspiracid-6 (6) showing ^1H and ^{13}C chemical shifts and ROESY correlations.....	S6
Figure S5. Structure of ring E from C-21 to C-25 showing ROESY correlations.....	S7
Figure S6. Structure of fused rings F, G and H from C-28 to C-36 showing ROESY correlations.....	S8
Figure S7. Structure of rings A, B, C and D from C-6 to C-19 showing ROESY correlations.....	S9
Figure S8. QTof analysis of A) an azaspiracid-1 (1) and azaspiracid-6 (6) sample stored in methanol, B) at 40 °C for 4 weeks and C) after treatment with diazomethane.	S10
Figure S9. QTof analysis of A) an azaspiracid-6 (6) sample after treatment with periodate showing the periodate cleavage product peak in the <i>m/z</i> 434 trace and B) the azaspiracid-6 (6) sample prior to reaction with periodate.	S11
Figure S10. QTof analysis of A) an azaspiracid-3 (3) sample after treatment with periodate showing the periodate cleavage product peak in the <i>m/z</i> 434 trace and B) the azaspiracid-3 (3) sample prior to reaction with periodate.	S11
Figure S11. QTof analysis of A) an AZA1 and AZA6 sample stored in methanol at 40 °C for 4 weeks with the formation of AZA6 methyl ketal in the 856.5 trace and B) after treatment with periodate.....	S12

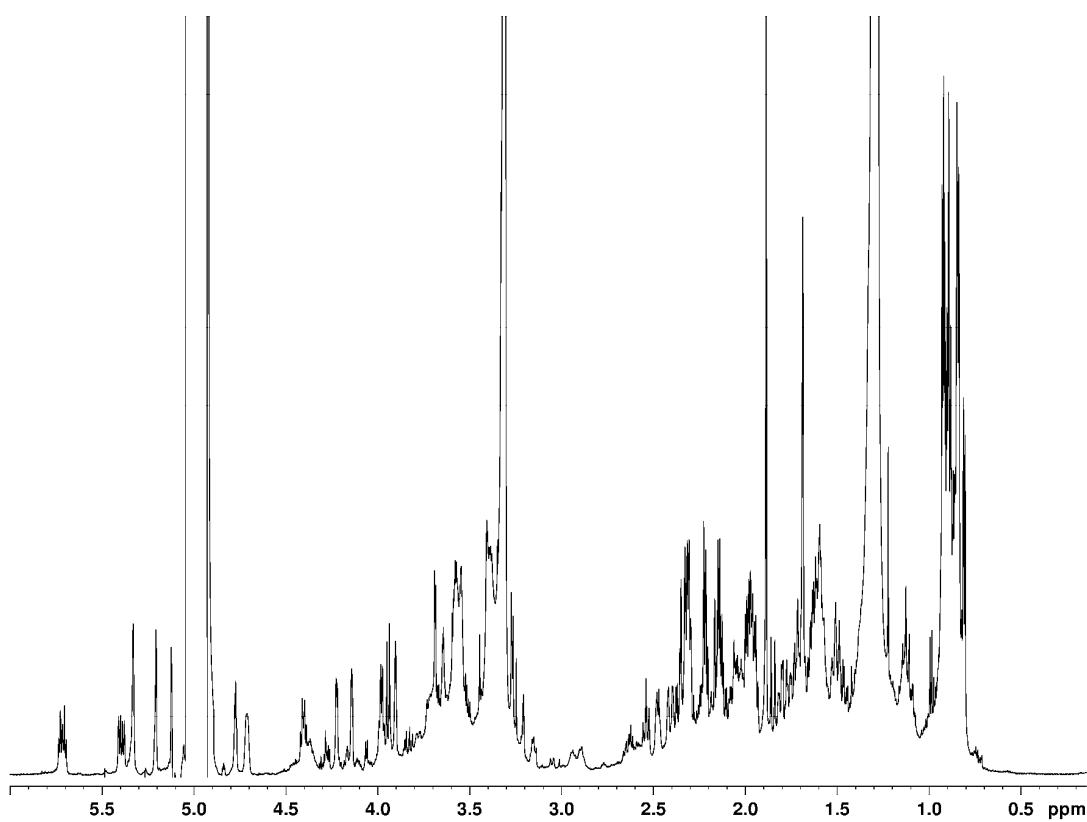


Figure S1. ^1H NMR spectrum of azaspiracid-6 (**6**).

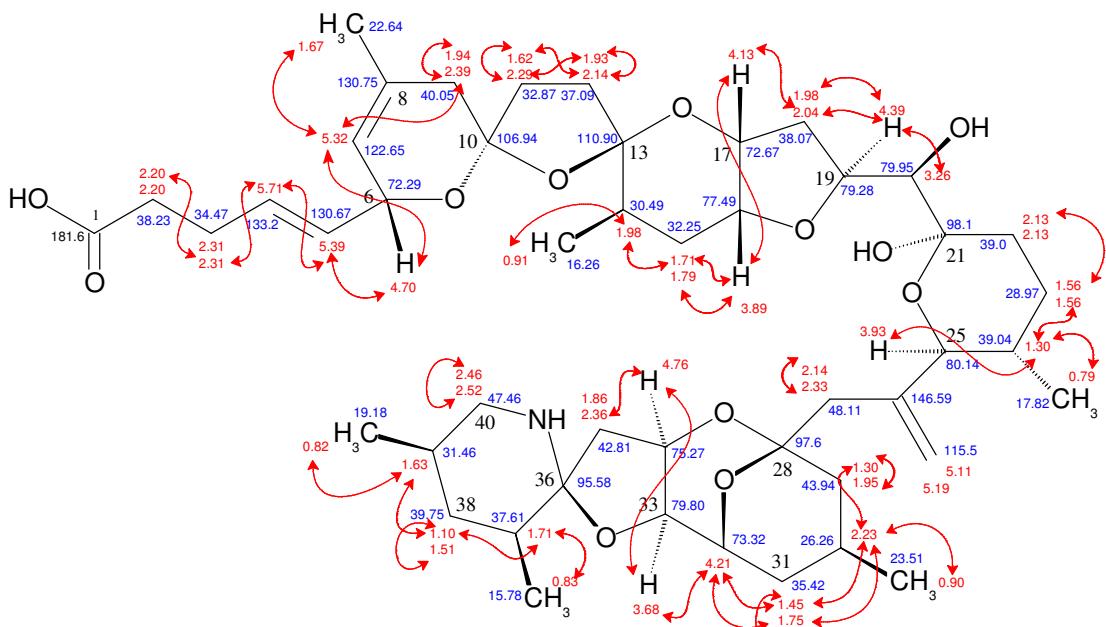


Figure S2. Structure of azaspiracid-6 (**6**) showing ¹H and ¹³C chemical shifts and COSY correlations.

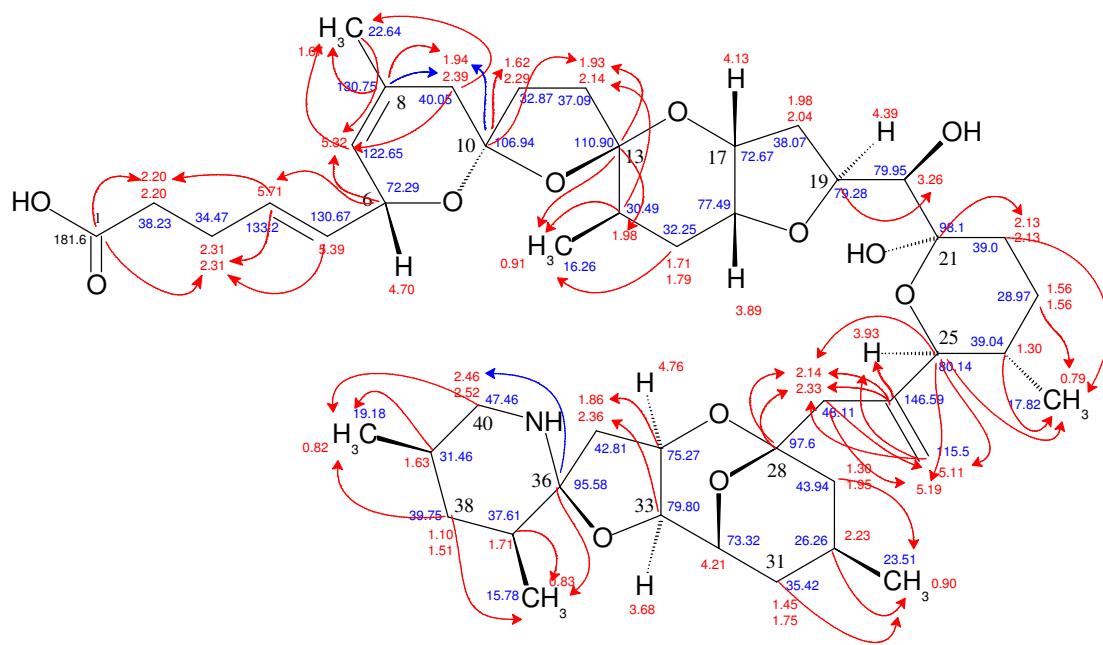


Figure S3. Structure of azaspiracid-6 (**6**) showing ¹H and ¹³C chemical shifts and HMBC correlations.

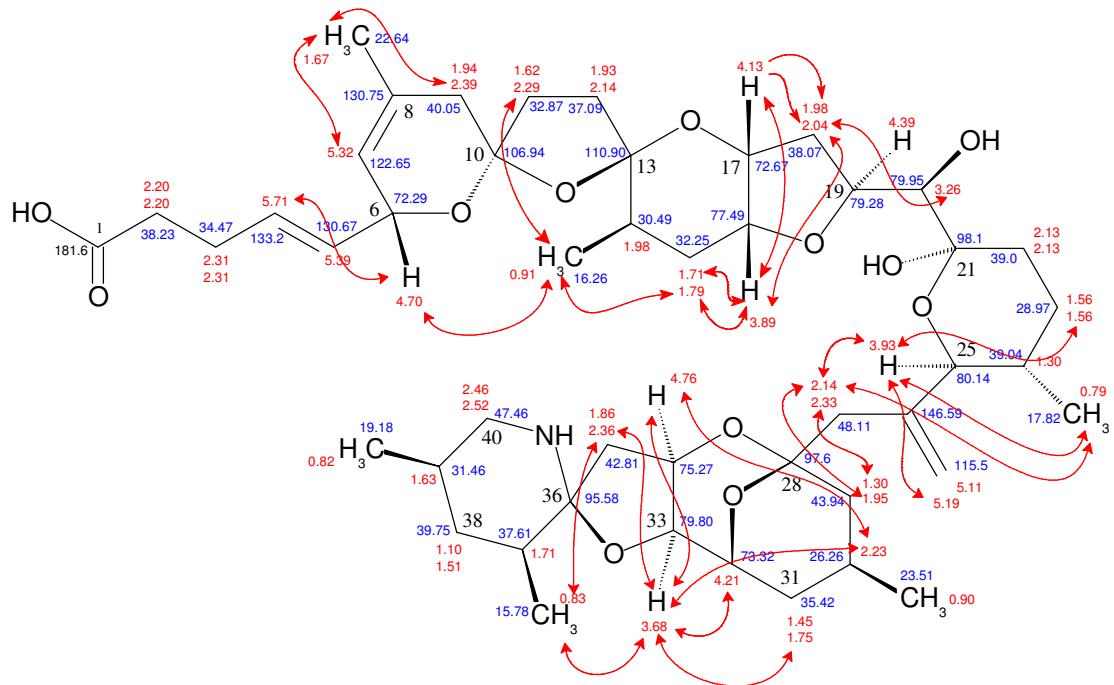


Figure S4. Structure of azaspiracid-6 (**6**) showing ^1H and ^{13}C chemical shifts and ROESY correlations.

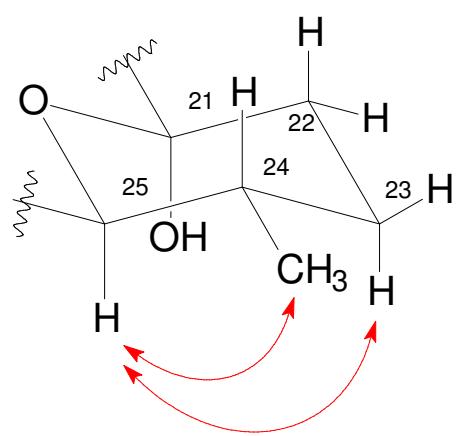


Figure S5. Structure of ring E from C-21 to C-25 showing ROESY correlations.

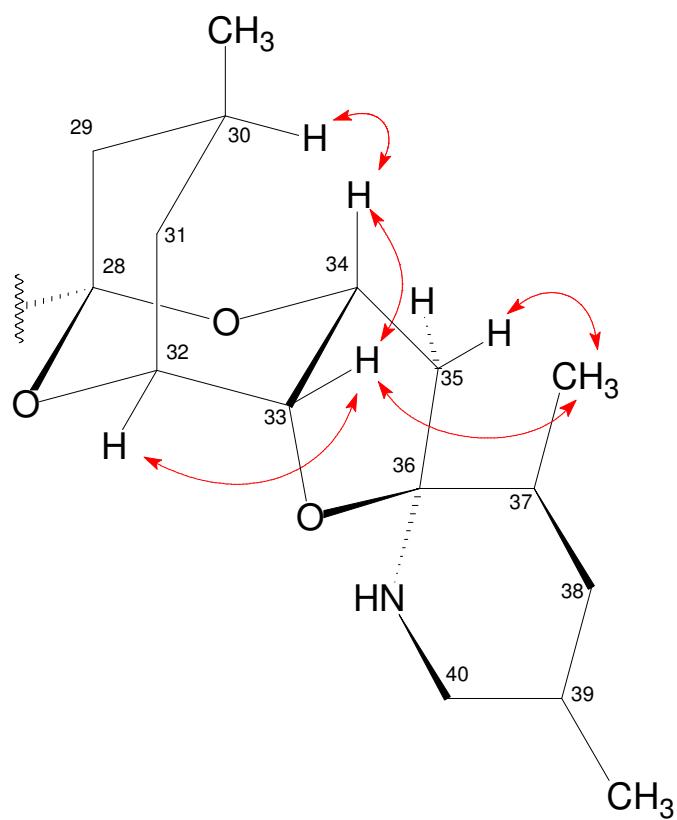


Figure S6. Structure of fused rings F, G and H from C-28 to C-36 showing ROESY correlations.

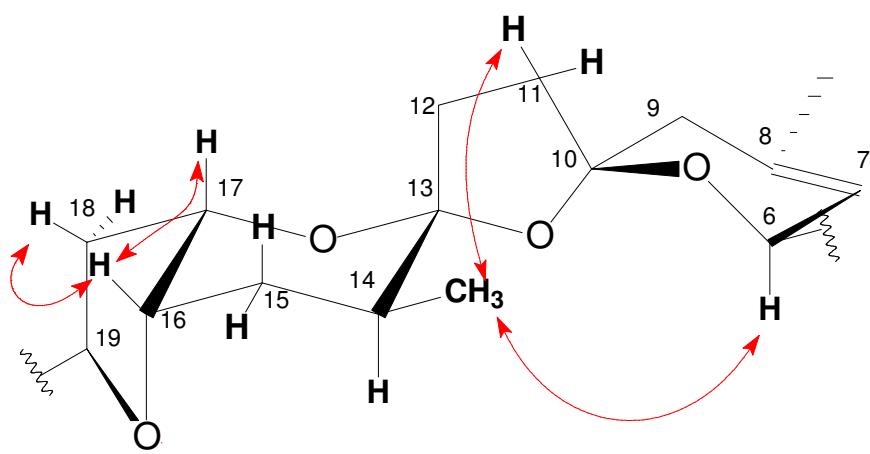


Figure S7. Structure of rings A, B, C and D from C-6 to C-19 showing ROESY correlations.

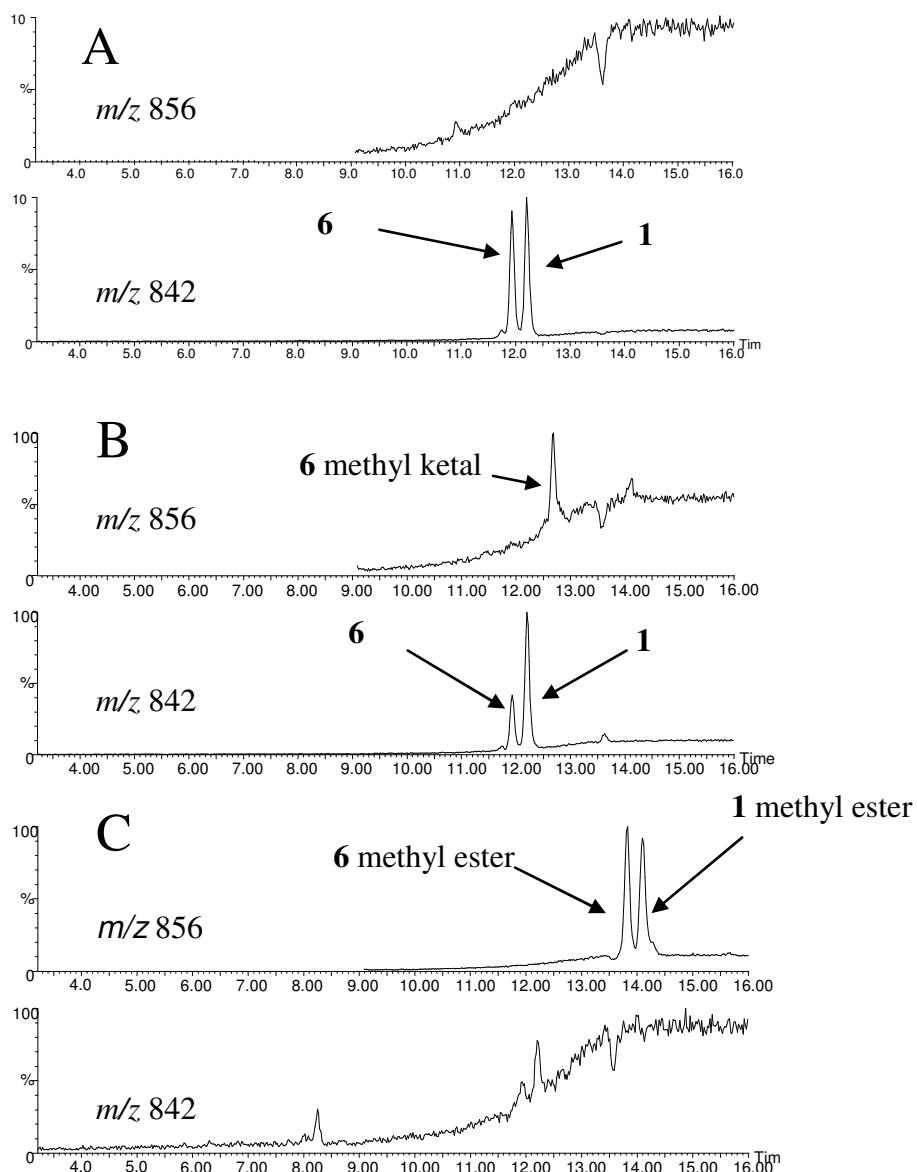


Figure S8. QToF analysis of A) an azaspiracid-1 (**1**) and azaspiracid-6 (**6**) sample stored in methanol, B) at 40 °C for 4 weeks and C) after treatment with diazomethane.

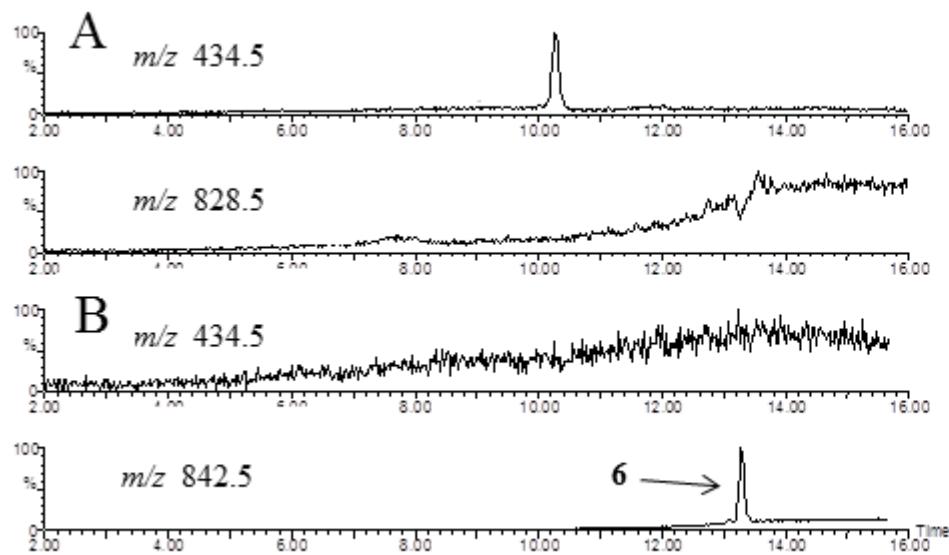


Figure S9. QToF analysis of A) an azaspiracid-6 (**6**) sample after treatment with periodate showing the periodate cleavage product peak in the m/z 434 trace and B) the azaspiracid-6 (**6**) sample prior to reaction with periodate.

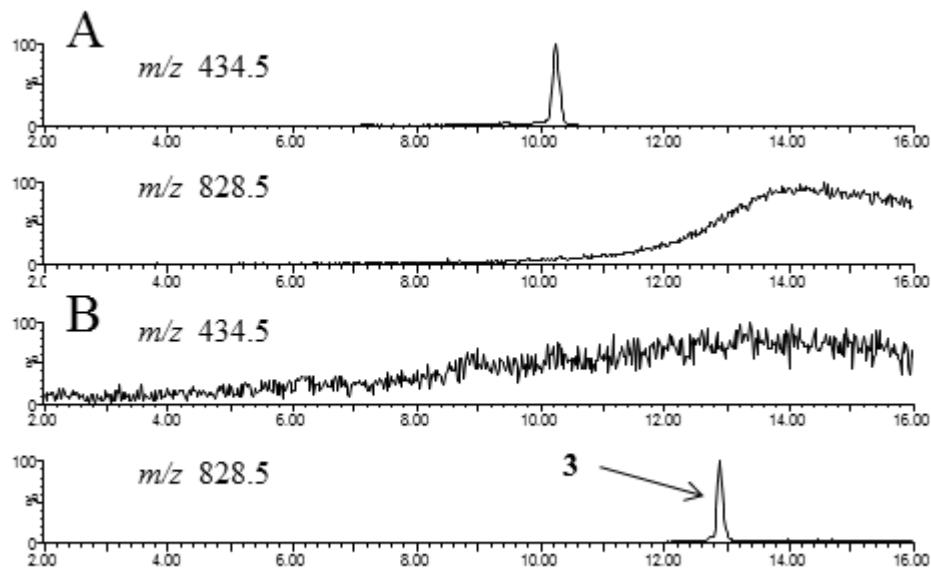


Figure S10. QToF analysis of A) an azaspiracid-3 (**3**) sample after treatment with periodate showing the periodate cleavage product peak in the m/z 434 trace and B) the azaspiracid-3 (**3**) sample prior to reaction with periodate.

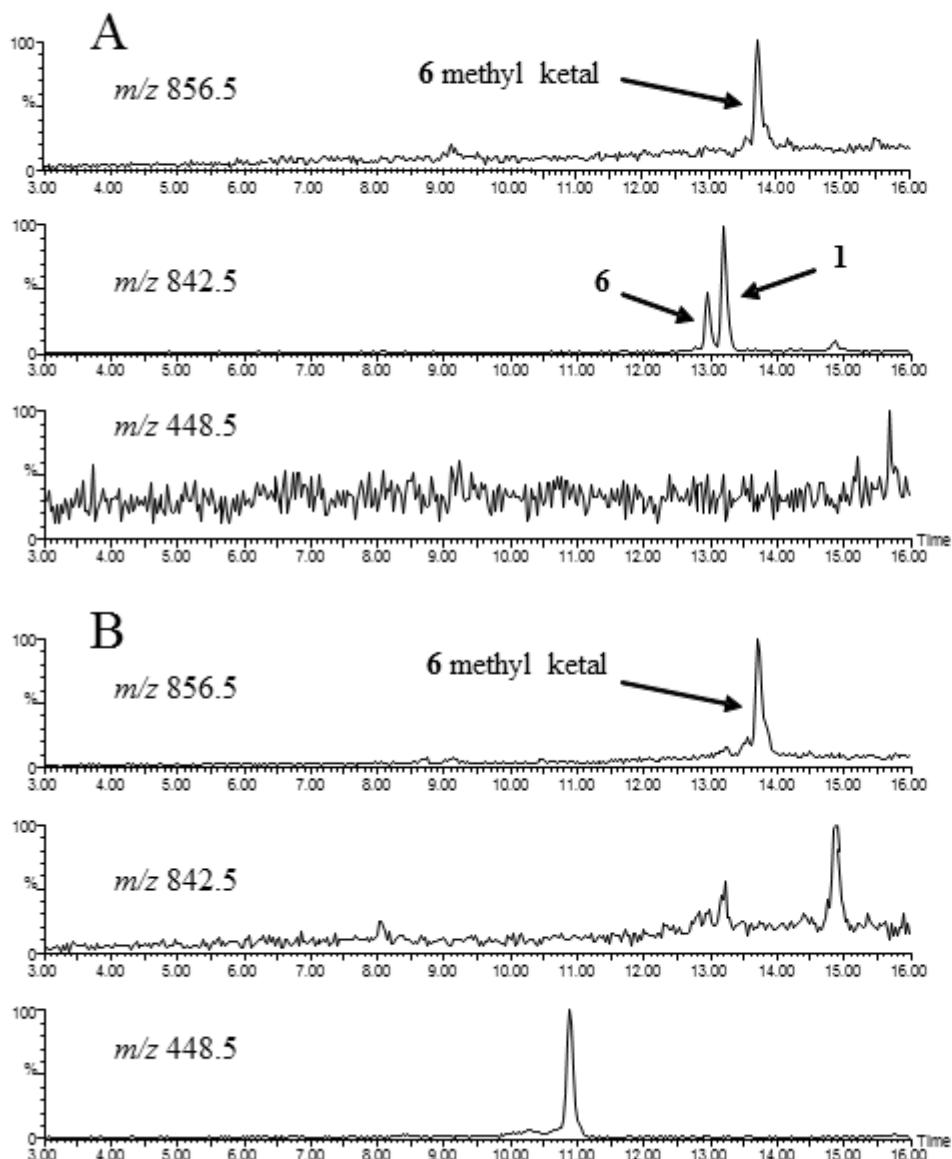


Figure S11. QTof analysis of A) an azaspiracid-1 (**1**) and azaspiracid-6 (**6**) sample stored in methanol at 40 °C for 4 weeks with the formation of azaspiracid-6 (**6**) methyl ketal in the 856.5 trace and B) after treatment with periodate.