

Corrigendum

Corrigendum to "A concise synthesis of L-4,4-difluoroglutamine" [Tetrahedron Lett. 42 (2001) 8625–8627][†]

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Recently, we were led to re-examine our structural assignments of the final product reported in the above publication: further detailed analyses showed that the product obtained after amino group deprotection was actually L-4,4-difluoroglutamic acid 9 due to concomitant hydrolytic cleavage of the amide group. This problem could be cicumvented by using a different amino protecting group which could be removed under non hydrolytic conditions.

$$\begin{array}{c|c} HO_2C & CONH_2 & HO_2C & CO_2H \\ \hline \hline NH & F & 80\% & NH_2F & F \\ \hline \\ Boc & 8 & 9 \\ \end{array}$$

Analytical data given in reference 23 on page 8627 correspond indeed to L-4,4-difluoroglutamic acid 9 and are in agreement with the previously described data for the same compound.^{1,2}

Molecular mass for L-4,4-difluoroglutamic acid $\bf 9$ is M=183 u versus M=182 u for L-4,4-difluoroglutamine $\bf 1$. Supplementary MS and microanalysis data are given below.

MS (DCI, NH₃): m/z 200 (M-H₂O+NH₃NH₄)⁺, 183 (M-H₂O+NH₄)⁺ where M=183 u.

MS (DCI, ND₃): m/z 209 (M'-D₂O+ND₃ND₄)⁺, 189 (M'-D₂O+ND₄)⁺ where M'=187 u for deuteriated L-4,4-difluoroglutamic acid.

MS (ESI, negative mode): m/z 182 (M-H)⁻.

Anal. calcd for $C_5H_7F_2NO_4$: C, 32.80; H, 3.85; N, 7.65. Found: C, 32.52; H, 3.87; N, 7.32.

The authors regret this misinterpretation which was due to same MS (DCI, NH₃) analysis results for compounds 1 and 9.

However, the analyses of the Boc-protected amide 8 are consistent with the proposed structure and full experimental details will be published elsewhere.

References

- 1. Konas, D. W.; Coward, J. K. Org. Lett. 1999, 1, 2105-2107.
- 2. Ding, Y.; Wang, J.; Abboud, K. A.; Xu, Y.; Dolbier, W. R.; Richards, N. G. J. J. Org. Chem. 2001, 66, 6381-6388.

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