

{rokbox title=| Sampling areas for *Illex coindetii* and *Loligo forbesii* in the North Sea (NS), Sea West of Scotland (SS), Celtic Sea (CS), Balearic Sea (BS), Sea West of Sardinia (SWS), Sea East of Sardinia (SES), Western Ionian Sea (IS), South Adriatic Sea (AS) in the North East Atlantic Ocean and Mediterranean Sea during 2021–2022 :: Image:

Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-classification-european-*Illex coindetii*-2026-valls-thumb-et-al.jpg|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-classification-european-*Illex coindetii*-2026-valls-et-al.jpg{/rokbox}

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[Classification of European *Illex coindetii* and *Loligo forbesii* Squid Stocks by Trace Element Analysis of Statoliths.](#)

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Abstract: We investigated whether statolith microchemistry analysis could classify ommastrephid and loliginid squid species into fishery stocks. Statolith nucleus (early life stage) and edge (life stage at time before catch) of *Illex coindetii* (Verany, 1839) and *Loligo forbesii* (Steenstrup, 1856) from various areas of the North East Atlantic Ocean and Mediterranean Sea during 2021–2022 were analysed using laser ablation ICP-MS to measure values of 11 trace elements (Na, Mg, Mn, Fe Co, Cu, Zn, Sr., Ba, Pb and U) next to calcium. Four stocks were categorised for *I. coindetii* and five stocks for

L. forbesii

amongst sample areas. Common hatching areas and migration into distinct fishing regions were also identified. Our results provide substantial information to sustainably manage fisheries for both species in European waters by providing stock definitions, spawning periods and migration patterns.

Keywords: Loliginidae, Myopsida, Oegopsida, Ommastrephidae, statolith microchemistry analysis, stock structure.