

Table S7. Irradiation details. Details of the nuclear irradiation carried-out in the Petten high fluence reactor in 2012 [10].

Irradiation	MN2012f
Reactor	Petten
Date	24/07/2012
Duration	24 hours
# of Hb3gr	10
J^a	0.00626 ± 0.00011
Thermal^b (n·cm⁻²)	$(6.34 \pm 0.09) \times 10^{18}$
Epithermal^c (n·cm⁻²)	$(1.38 \pm 0.19) \times 10^{17}$
f^d	39.4 ± 6.4
Alpha^e	0.50 ± 0.03
Beta^f	9.8 ± 0.5

^a Calculated from $J = \frac{(e^{\lambda t_m} - 1)}{Ar} \cdot \frac{1}{^{39}Ar}$; ^b Calculated from the thermal fluence

$\varphi_{th} = \frac{\beta \cdot J}{(M_K/M_{Cl}) \cdot (K/^{40}K) \cdot (\lambda/\lambda_e) \cdot \sigma_{37Cl} \cdot (^{37}Cl/Cl)}$; ^c The epithermal fluence has been calculated using Shal-

lowater [126]; ^d $f = \varphi_{th} / \varphi_{epi}$, with φ_{th} and φ_{epi} being the thermal and epithermal neutron fluences, respectively; ^e Calculated from the Hb3gr monitor $\frac{K}{Ca} = \alpha \frac{^{39}Ar_K}{^{37}Ar_{Ca}}$ [127]; ^f Calcu-

lated from the Hb3gr monitor $\frac{K}{Cl} = \beta \frac{^{39}Ar_K}{^{37}Ar_{Cl}}$ [128].