

ESI Lugli et al. 'SrDR'

ESI Table 1: Argon and Ca isotopes including masses and relative abundance. Abundances are taken from Berglund and Wieser (2011).

Isotope	Mass	Abundance
Ar ³⁶	36	0.334%
Ar ³⁸	38	0.063%
Ar ⁴⁰	40	99.604%
Ca ⁴⁰	40	96.941%
Ca ⁴²	42	0.647%
Ca ⁴³	43	0.135%
Ca ⁴⁴	44	2.086%
Ca ⁴⁶	46	0.004%
Ca ⁴⁸	48	0.187%

ESI Table 2: Calcium dimer formation, calculated by the product of the relative abundances of the two Ca isotopes. Please note that we excluded Ca dimers which do not interfere within the mass range 82 - 88

Potential Ca dimers	82	83	84	85	86	87	88	89
Ca ⁴⁰ Ca ⁴²	0.6272%							
Ca ⁴⁰ Ca ⁴³		0.1309%						
Ca ⁴⁰ Ca ⁴⁴			2.0222%					
Ca ⁴⁰ Ca ⁴⁶					0.0039%			
Ca ⁴⁰ Ca ⁴⁸							0.1813%	
Ca ⁴² Ca ⁴⁰	0.6272%							
Ca ⁴² Ca ⁴²			0.0042%					
Ca ⁴² Ca ⁴³				0.0009%				
Ca ⁴² Ca ⁴⁴					0.0135%			
Ca ⁴² Ca ⁴⁶							0%	
Ca ⁴³ Ca ⁴⁰		0.1309%						
Ca ⁴³ Ca ⁴²				0.0009%				
Ca ⁴³ Ca ⁴³					0.0002%			
Ca ⁴³ Ca ⁴⁴						0.0028%		
Ca ⁴³ Ca ⁴⁶								0%
Ca ⁴⁴ Ca ⁴⁰			2.0222%					
Ca ⁴⁴ Ca ⁴²					0.0135%			
Ca ⁴⁴ Ca ⁴³						0.0028%		
Ca ⁴⁴ Ca ⁴⁴							0.0435%	
Ca ⁴⁶ Ca ⁴⁰					0.0039%			
Ca ⁴⁶ Ca ⁴²							0%	
Ca ⁴⁶ Ca ⁴³								0%
Ca ⁴⁸ Ca ⁴⁰							0.1813%	
Σ Ca dimer	1.2544%	0.2617%	4.0486%	0.0017%	0.0349%	0.0056%	0.4061%	0%

References

Berglund, M., & Wieser, M. E. (2011). Isotopic compositions of the elements 2009 (IUPAC Technical Report). *Pure and applied chemistry*, 83(2), 397-410.

ESI Table 3: Calcium argide formation, calculated by the product of the relative abundances of the Ca and Ar isotopes. Please note that we excluded Ca argides which do not interfere within the mass range 82 - 88

Potential Ca argides	82	83	84	85	86	87	88	89
Ca ⁴² Ar ⁴⁰	0.6444%							
Ca ⁴³ Ar ⁴⁰		0.1345%						
Ca ⁴⁴ Ar ³⁸	0.0013%							
Ca ⁴⁴ Ar ⁴⁰			2.0777%					
Ca ⁴⁶ Ar ³⁶	0.0000%							
Ca ⁴⁶ Ar ³⁸			0.0000%					
Ca ⁴⁶ Ar ⁴⁰					0.0040%			
Ca ⁴⁸ Ar ³⁶			0.0006%					
Ca ⁴⁸ Ar ³⁸					0.0001%			
Ca ⁴⁸ Ar ⁴⁰							0.1863%	
Σ Ca argides	0.6458%	0.1345%	2.0784%	0%	0.0041%	0%	0.1863%	0%

References

Berglund, M., & Wieser, M. E. (2011). Isotopic compositions of the elements 2009 (IUPAC Technical Report). *Pure and applied chemistry*, 83(2), 397-410.