ASP Isotopes Inc. 1101 Pennsylvania Avenue NW, Suite 300 Washington, DC 20004

June 10, 2024

VIA EDGAR

Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, D.C. 20549 Attention: Abby Adams

Re: ASP Isotopes Inc.

Registration Statement on Form S-3

File No. 333-279857

Acceleration Request

Requested Date: Wednesday, June 12, 2024 Requested Time: 4:00 P.M. Eastern Time

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, ASP Isotopes Inc. hereby requests that the Securities and Exchange Commission accelerate the effectiveness of the above-referenced Registration Statement to 4:00 p.m., Eastern Time, on June 12, 2024, or as soon thereafter as practicable.

Please confirm once the Registration Statement has been declared effective by calling Donald Ainscow of Blank Rome LLP at (972) 850-1474. Please also contact him should you have any questions.

Very truly yours,

ASP ISOTOPES INC.

/s/ Paul Mann

Paul Mann Chief Executive Officer

ce: Donald Ainscow, Esq. Blank Rome LLP