

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

ASP Isotopes Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

00218A105

(CUSIP Number)

12/31/2024

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
 Rule 13d-1(c)
 Rule 13d-1(d)

SCHEDULE 13G

CUSIP No. 00218A105

1	Names of Reporting Persons BlackRock, Inc.
2	Check the appropriate box if a member of a Group (see instructions) <input type="checkbox"/> (a) <input checked="" type="checkbox"/> (b)
3	Sec Use Only
4	Citizenship or Place of Organization DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 3,931,924.00
	6	Shared Voting Power 0.00
	7	Sole Dispositive Power 3,955,388.00
	8	Shared Dispositive Power 0.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person 3,955,388.00	
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) <input type="checkbox"/>	
11	Percent of class represented by amount in row (9) 5.5 %	
12	Type of Reporting Person (See Instructions) HC	

SCHEDULE 13G

Item 1.

- (a) **Name of issuer:**
ASP Isotopes Inc.
- (b) **Address of issuer's principal executive offices:**
1101 PENNSYLVANIA AVENUE NWSUITE 300 WASHINGTON DC 20004

Item 2.

- (a) **Name of person filing:**
BlackRock, Inc.
In accordance with SEC Release No. 34-39538 (January 12, 1998), this Schedule 13G reflects the securities beneficially owned, or deemed to be beneficially owned, by certain business units (collectively, the "Reporting Business Units") of BlackRock, Inc. and its subsidiaries and affiliates. It does not include securities, if any, beneficially owned by other business units whose beneficial ownership of securities are disaggregated from that of the Reporting Business Units in accordance with such release.
- (b) **Address or principal business office or, if none, residence:**
BlackRock, Inc. 50 Hudson Yards New York, NY 10001
- (c) **Citizenship:**
See Item 4 of Cover Page
- (d) **Title of class of securities:**
Common Stock
- (e) **CUSIP No.:**
00218A105

Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a) Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);
- (b) Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
- (c) Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
- (d) Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);

- (e) An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);
- (f) An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);
- (g) A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h) A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J), please specify the type of institution:
- (k) Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

(a) **Amount beneficially owned:**

3955388

(b) **Percent of class:**

5.5 %

(c) **Number of shares as to which the person has:**

(i) **Sole power to vote or to direct the vote:**

3931924

(ii) **Shared power to vote or to direct the vote:**

0

(iii) **Sole power to dispose or to direct the disposition of:**

3955388

(iv) **Shared power to dispose or to direct the disposition of:**

0

Item 5. Ownership of 5 Percent or Less of a Class.

Item 6. Ownership of more than 5 Percent on Behalf of Another Person.

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than 5 percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

Various persons have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of the common stock of ASP Isotopes Inc.. No one person's interest in the common stock of ASP Isotopes Inc. is more than five percent of the total outstanding common shares.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

If a parent holding company has filed this schedule, pursuant to Rule 13d-1(b)(ii)(G), so indicate under Item 3(g) and attach an exhibit stating the identity and the Item 3 classification of the relevant subsidiary. If a parent holding company has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identification of the relevant subsidiary.

See Exhibit 99

Item 8. Identification and Classification of Members of the Group.

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certifications:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under ?? 240.14a-11.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

BlackRock, Inc.

Signature: Spencer Fleming

Name/Title: Managing Director

Date: 02/04/2025

POWER OF ATTORNEY

The undersigned, BlackRock, Inc., a corporation duly organized under the laws of the State of Delaware, United States (the "Company"), does hereby make, constitute and appoint each of Eric Andruczyk, Richard Cundiff, R. Andrew Dickson, III, Spencer Fleming, Laura Hildner, David Maryles, Christopher Meade, Charles Park, James Raby, Daniel Riemer, David Rothenberg and Brenda Schulz, acting severally, as its true and lawful attorneys-in-fact, for the purpose of, from time to time, executing, in its name and on its behalf and on behalf of its direct and indirect subsidiaries and affiliates, any and all documents, certificates, instruments, statements, filings, agreements and amendments (collectively, "documents") determined by such person to be necessary or appropriate to comply with ownership or control-person reporting requirements imposed by any United States or non-United States governmental or regulatory authority, including, without limitation, Schedules 13D and 13G and Forms 3, 4, 5, 13F, 13H, SHO and N-PX and any amendments to any of the foregoing as may be required to be filed with the Securities and Exchange Commission, and delivering, furnishing or filing any such documents with the appropriate governmental or regulatory authority or other person, and giving and granting to each such attorney-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary or proper to be done in the exercise of any of the rights and powers herein granted, as fully and to all intents and purposes as the Company and/or its direct and indirect subsidiaries, as applicable, might or could do if personally present by one of its authorized signatories, hereby ratifying and confirming all that said attorney-in-fact shall lawfully do or cause to be done by virtue hereof. Any such determination by an attorney-in-fact named herein shall be conclusively evidenced by such person's execution, delivery, furnishing or filing of the applicable document.

This power of attorney shall expressly revoke the power of attorney dated 30th day of April, 2023 in respect of the subject matter hereof, shall be valid from the date hereof and shall remain in full force and effect until either revoked in writing by the Company, or, in respect of any attorney-in-fact named herein, until such person ceases to be an employee of the Company or one of its affiliates.

IN WITNESS WHEREOF, the undersigned has caused this power of attorney to be executed as of this 21st day of January, 2025.

BLACKROCK, INC.

By: /s/ R. Andrew Dickson, III
Name: R. Andrew Dickson, III
Title: Corporate Secretary

BlackRock Advisors, LLC
Aperio Group, LLC
BlackRock Asset Management Canada Limited
BlackRock Fund Advisors
BlackRock Institutional Trust Company, National Association
BlackRock Financial Management, Inc.
BlackRock Investment Management, LLC

*Entity beneficially owns 5% or greater of the outstanding shares of the security class being reported on this Schedule 13G.