

Spectral AI, Inc.
2515 McKinney Avenue, Suite 1000
Dallas, Texas 75201

April 16, 2024

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, DC 20549

Re: Spectral AI, Inc.
Registration Statement on Form S-1 (File No. 333-278610)

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933 and on behalf of Spectral AI, Inc. (the "Company"), the undersigned hereby requests that the Company's Registration Statement on Form S-1 (File No. 333-278610) filed with the U.S. Securities and Exchange Commission on April 10, 2024 (the "Registration Statement"), be accelerated so that the Registration Statement will become effective on April 18, 2024, at 5:30 p.m., Eastern Standard Time, or as soon as practicable thereafter.

Please contact Herbert F. Kozlov (hkozlov@reedsmith.com / telephone: (212) 549-0241) of Reed Smith LLP with any questions and please notify when this request for acceleration has been granted.

Very truly yours,

SPECTRAL AI, INC.

By: /s/ Peter Carlson
Peter Carlson
Chief Executive Officer

cc:
Herbert F. Kozlov, Esq., Reed Smith LLP
Lynwood E. Reinhardt, Esq., Reed Smith LLP