

Supplementary Information of the work entitled “Coupling of digital image processing and three-way calibration to assist a paper-based sensor for determination of nitrite in food samples”

Zohreh Almasvandi^a, Ali Vahidinia^a, Ali Heshmati^a, Mohammad Mahdi Zangeneh^{b,c}, Hector C. Goicoechea^d,
Ali R. Jalalvand^{e,*}

^a*Department of Nutrition and Food Hygiene, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran*

^b*Department of Clinical Sciences, Faculty of Veterinary Medicine, Razi University, Kermanshah, Iran*

^c*Biotechnology and Medicinal Plants Research Center, Ilam University of Medical Sciences, Ilam, Iran*

^d*Laboratorio de Desarrollo Analítico y Quimiometría (LADAQ), Catedra de Química Analítica I, Universidad Nacional del Litoral, Ciudad Universitaria, CC242 (S3000ZAA), Santa Fe, Argentina*

^e*Research Center of Oils and Fats, Kermanshah University of Medical Sciences, Kermanshah, Iran*

*Corresponding Authors: ali.jalalvand1984@gmail.com (A.R. Jalalvand)

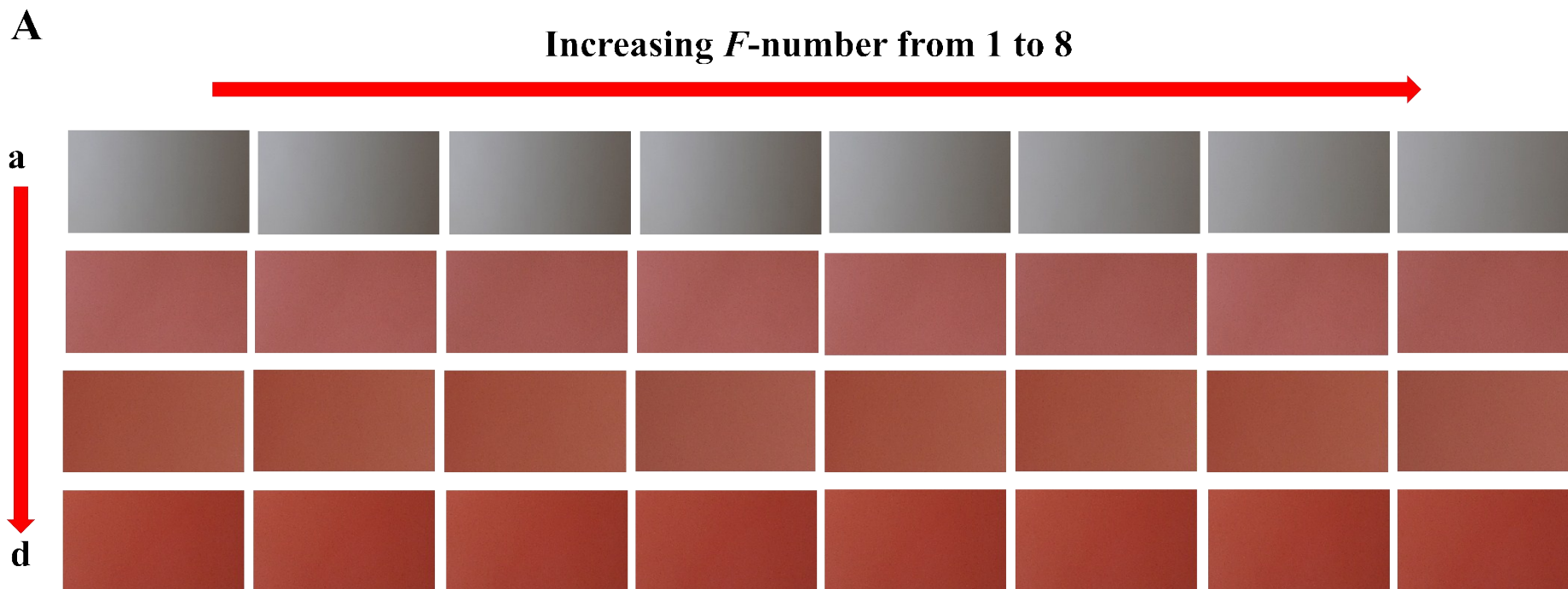


Fig. S1. The images of: (A) cabbage: (a) non-spiked, (b) 500 ppm spiked, (c) 250 ppm spiked, (d) 50 ppm spiked, (B) carrot: (a) non-spiked, (b) 500 ppm spiked, (c) 200 ppm spiked, (d) 50 ppm spiked, (C) lettuce: (a) non-spiked, (b) 450 ppm spiked, (c) 300 ppm spiked, (d) 50 ppm spiked, (D) watermelon: (a) non-spiked, (b) 500 ppm spiked, (c) 200 ppm spiked, (d) 100 ppm spiked, (E) onion: (a) non-spiked, (b) 400 ppm spiked, (c) 250 ppm spiked, (d) 20 ppm spiked, (F) potato: (a) non-spiked, (b) 500 ppm spiked, (c) 100 ppm spiked, (d) 10 ppm spiked, (G) kielbasa (Andre): (a) non-spiked, (b) 100 ppm spiked, (c) 10 ppm spiked, (H) kielbasa (Armen): (a) non-spiked, (b) 500 ppm spiked, (c) 50 ppm spiked, (I) kielbasa (Sham Sham): (a) non-spiked, (b) 500 ppm spiked, (c) 50 ppm spiked, (J) kielbasa (Dalahoo): (a) non-spiked, (b) 700 ppm spiked, (c) 500 ppm spiked, (K) sausage (Andre): (a) non-spiked, (b) 500 ppm spiked, (c) 100 ppm spiked, (L) sausage (Armen): (a) non-spiked, (b) 100 ppm spiked, (c) 10 ppm spiked, (M) sausage (Sham Sham): (a) non-spiked, (b) 200 ppm spiked, (c) 100 ppm spiked and (N) sausage (Silico): (a) non-spiked, (b) 200 ppm spiked, (c) 20 ppm spiked.

B

Increasing F -number from 1 to 8

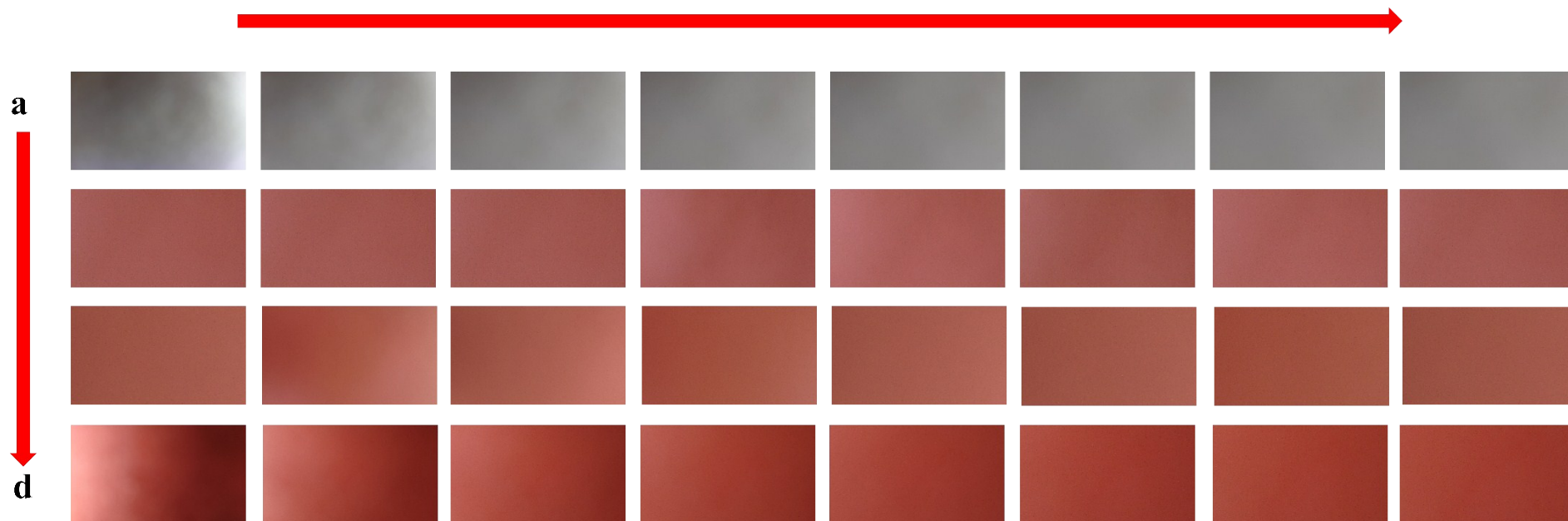


Fig. S1. Continued.

C

Increasing F -number from 1 to 8

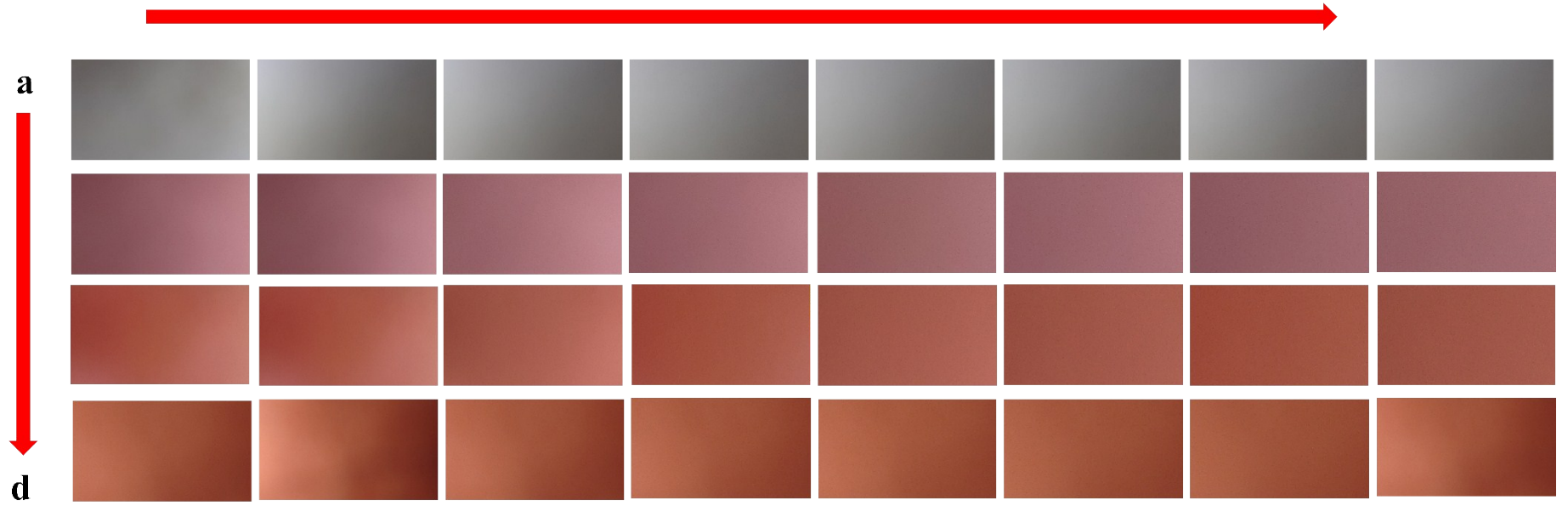


Fig. S1. Continued.

D

Increasing F -number from 1 to 8

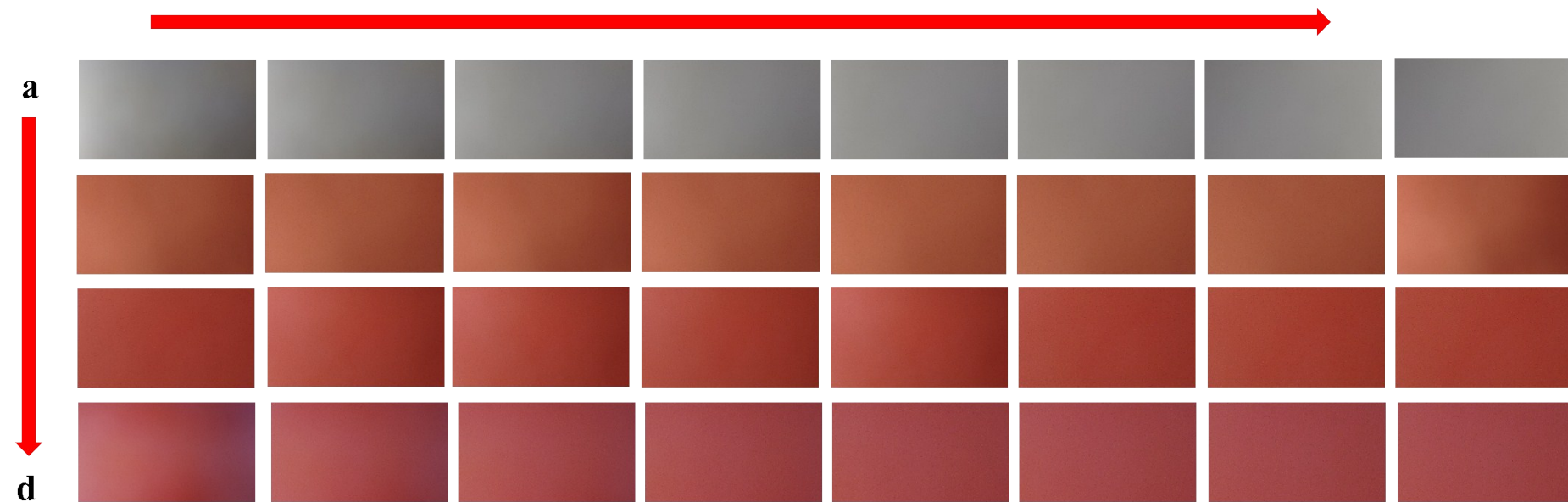


Fig. S1. Continued.

E

Increasing F -number from 1 to 8

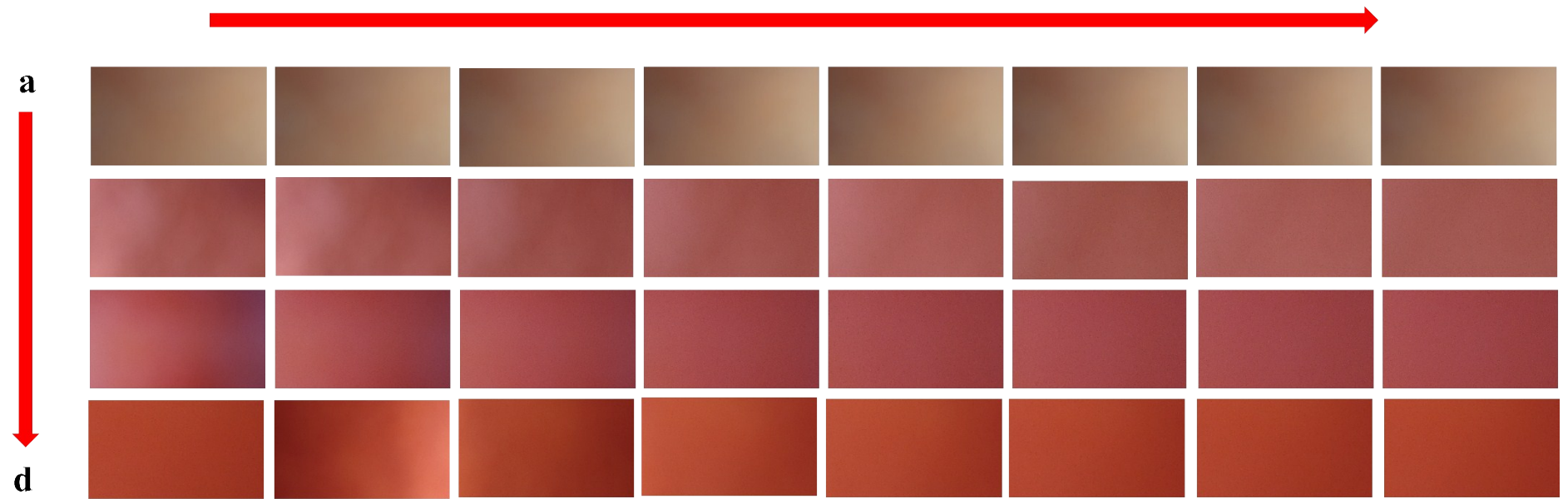


Fig. S1. Continued.

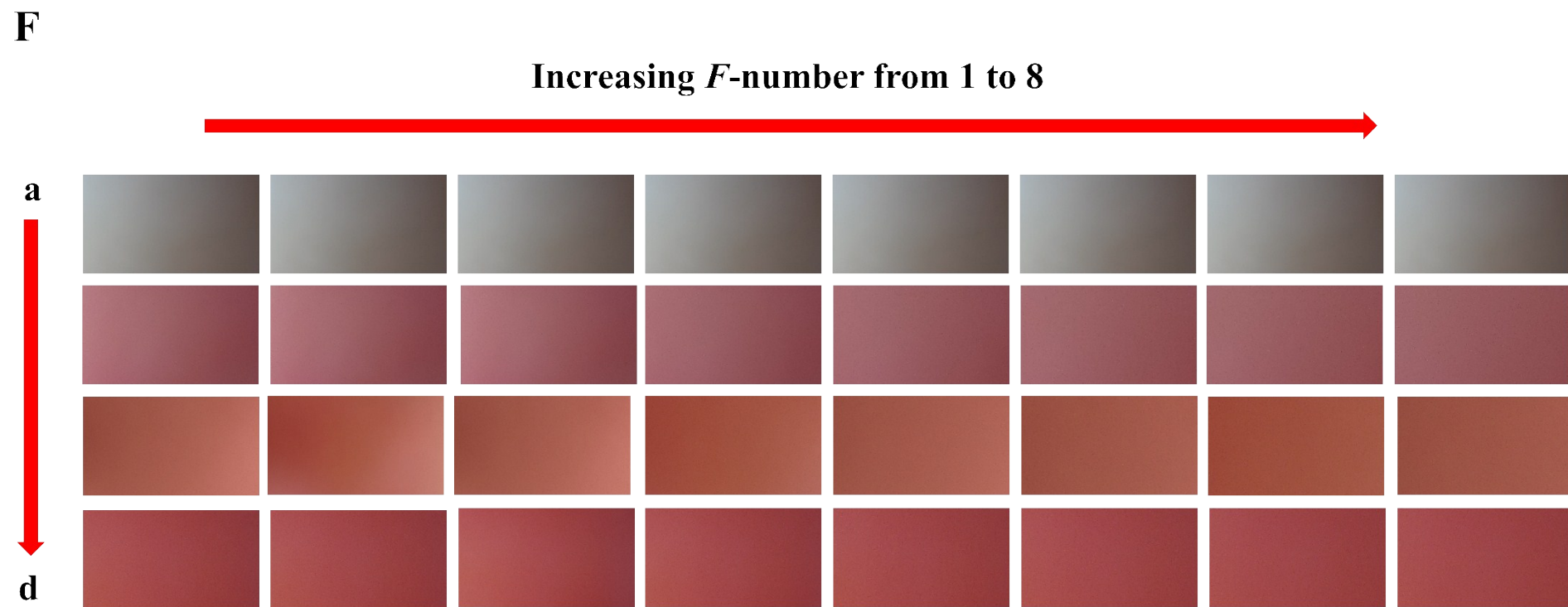


Fig. S1. Continued.

G

Increasing F -number from 1 to 8

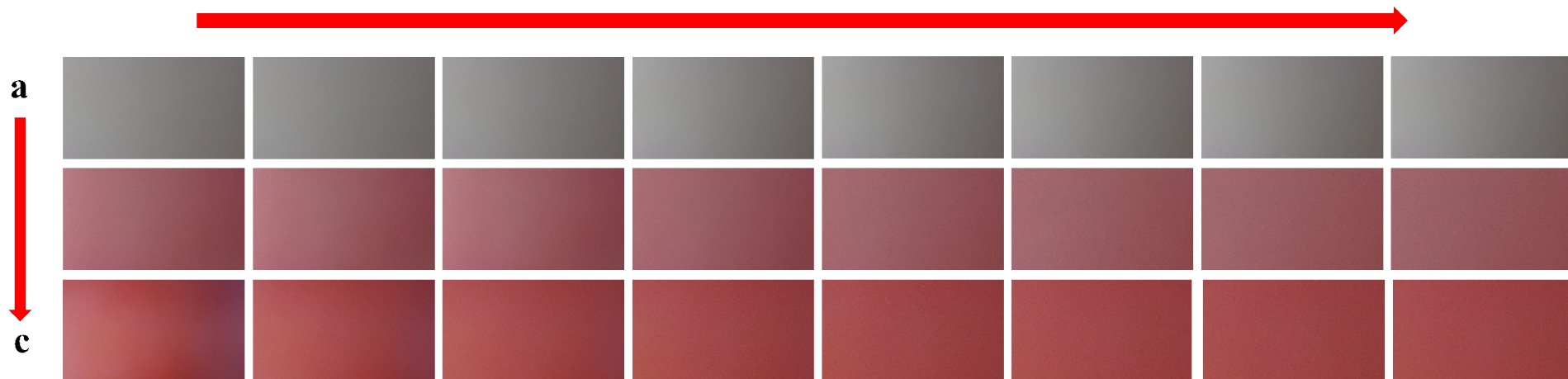


Fig. S1. Continued.

H

Increasing F -number from 1 to 8

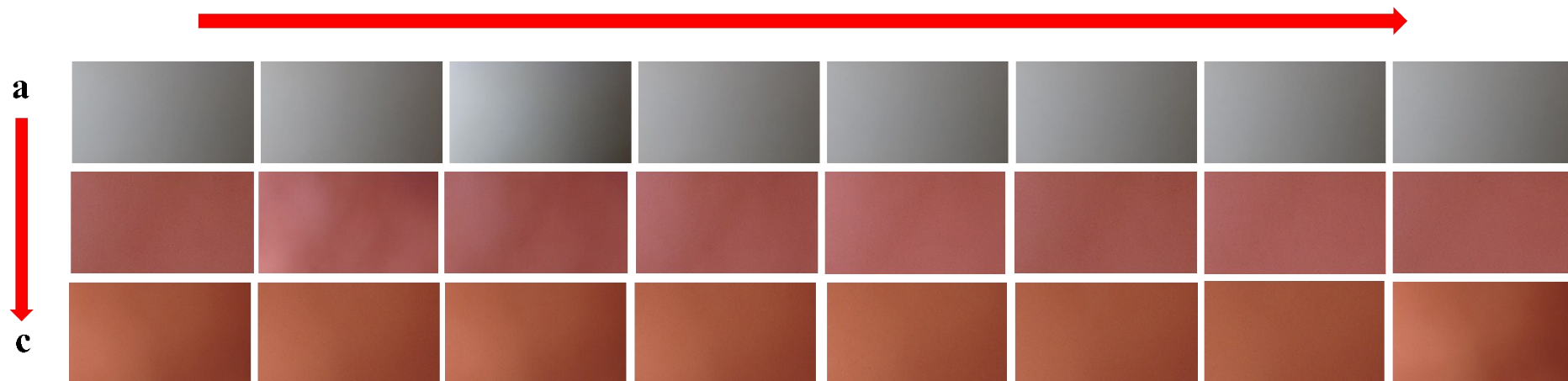


Fig. S1. Continued.

I

Increasing F -number from 1 to 8

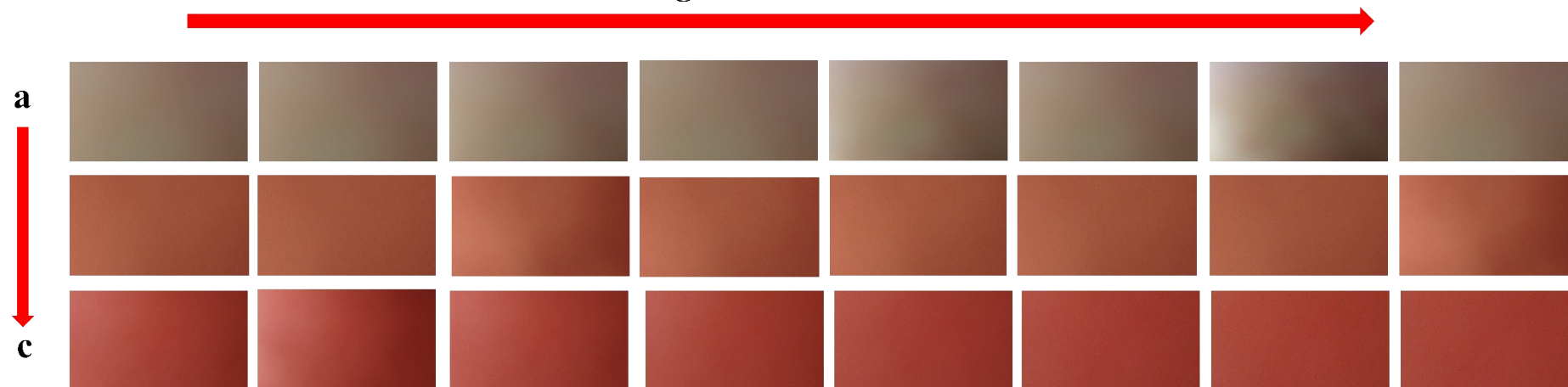


Fig. S1. Continued.

J

Increasing F -number from 1 to 8



a



c

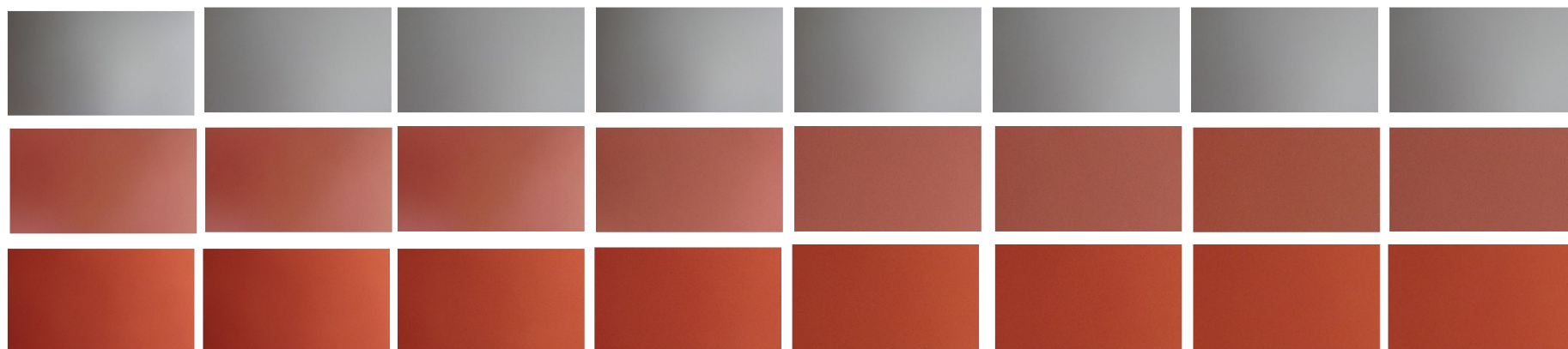


Fig. S1. Continued.

K

Increasing F -number from 1 to 8

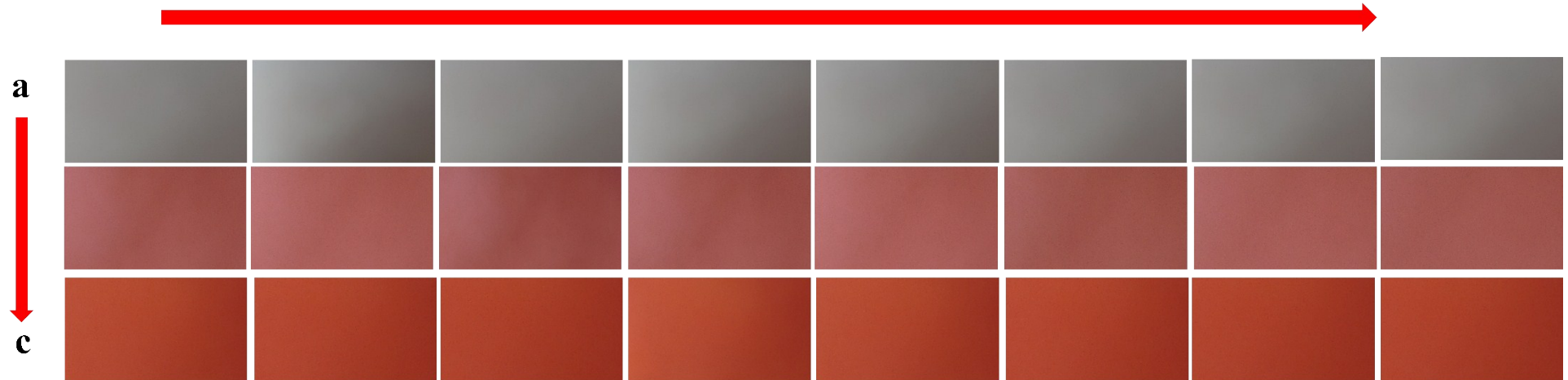


Fig. S1. Continued.



Fig. S1. Continued.

M

Increasing F -number from 1 to 8



a



c

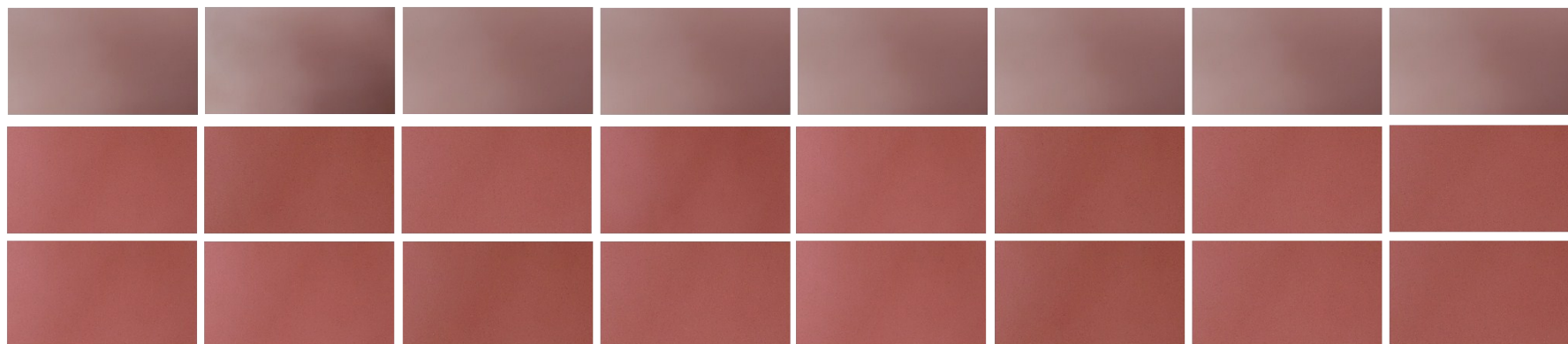


Fig. S1. Continued.

N

Increasing F -number from 1 to 8



a
↓
c

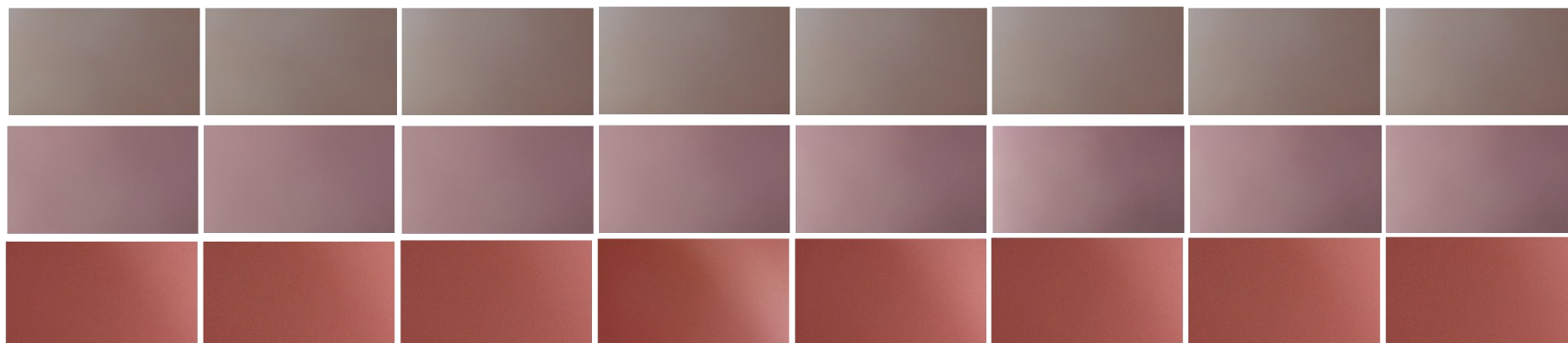


Fig. S1. Continued.