

Supplementary Materials

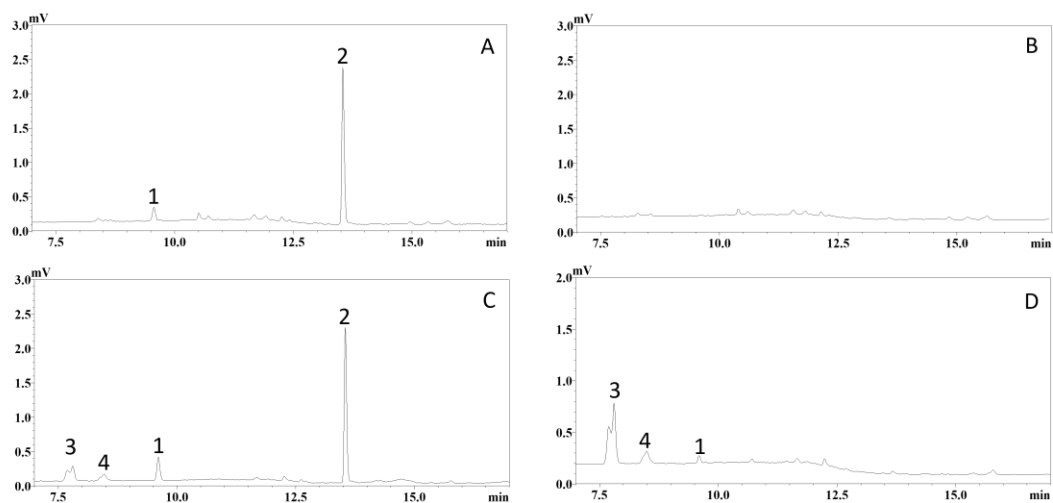


Figure S1. Representative chromatograms of mouse cardiac homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank mouse cardiac homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse cardiac homogenate; (C) cardiac sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) with internal standard; and (D) cardiac sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

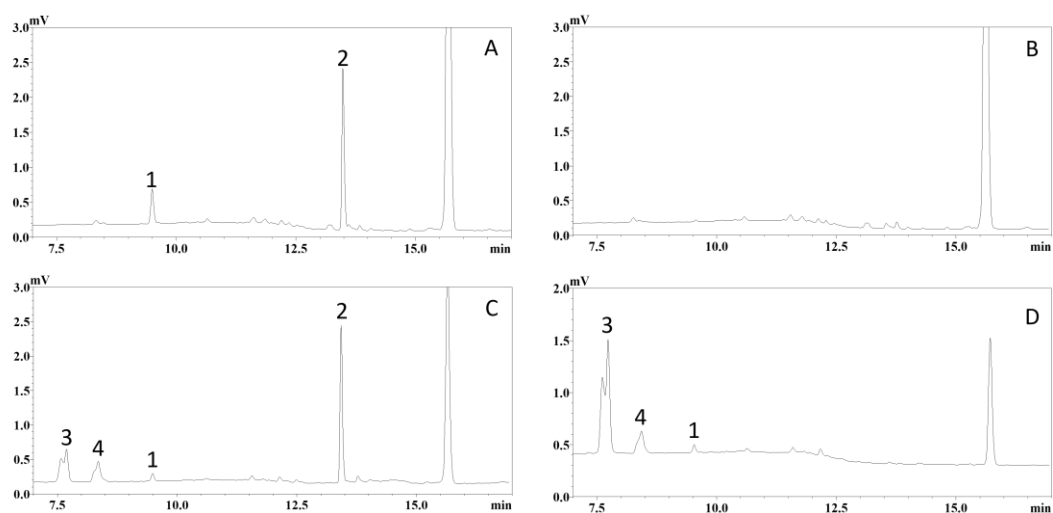


Figure S2. Representative chromatograms of mouse lung homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank mouse lung homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse lung homogenate; (C) lung sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) with internal standard; and (D) lung sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

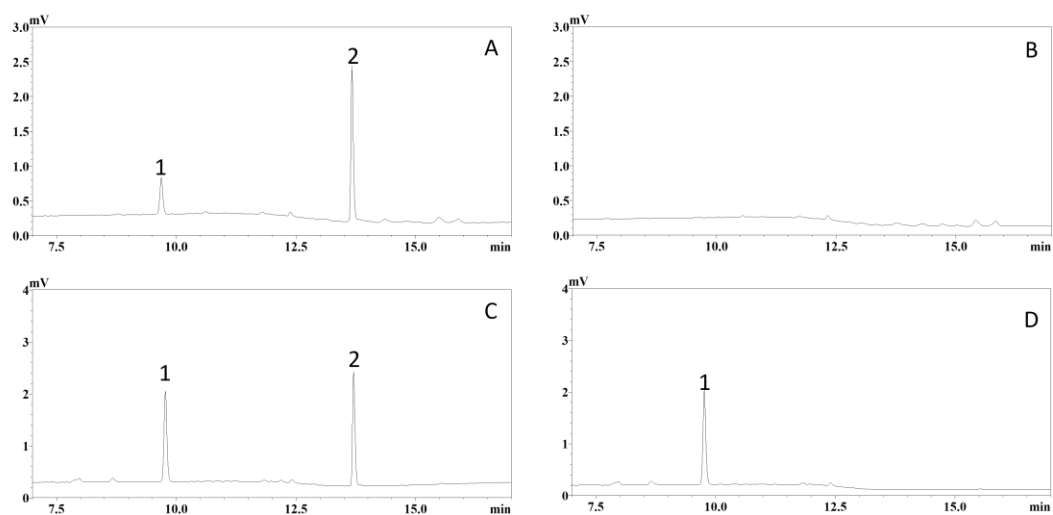


Figure S3. Representative chromatograms of mouse stomach homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank mouse stomach homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse stomach homogenate; (C) stomach sample collected 20 minutes after oral administration of ISO (200 μmol/kg) with internal standard; and (D) stomach sample collected 20 minutes after oral administration of ISO (200 μmol/kg) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

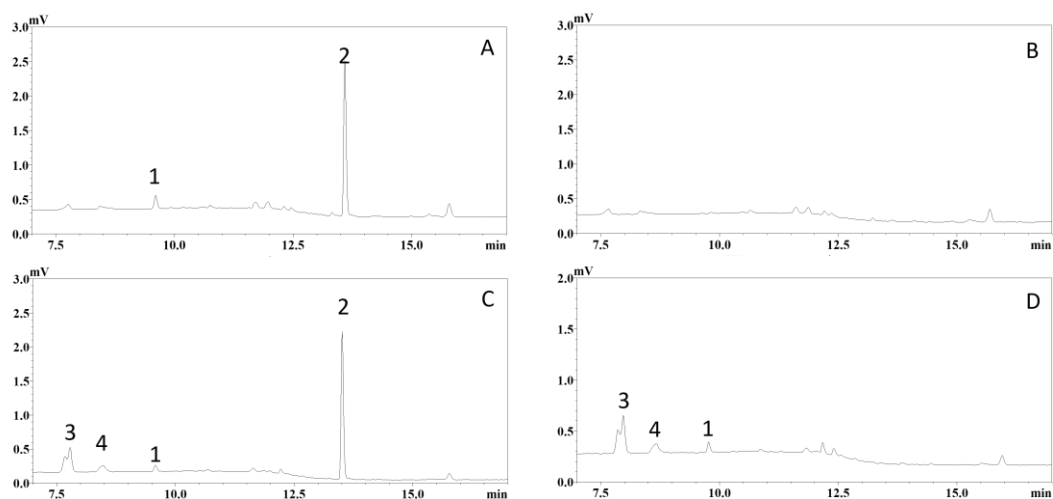


Figure S4. Representative chromatograms of mouse spleen homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank mouse spleen homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse spleen homogenate; (C) spleen sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) with internal standard; and (D) spleen sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

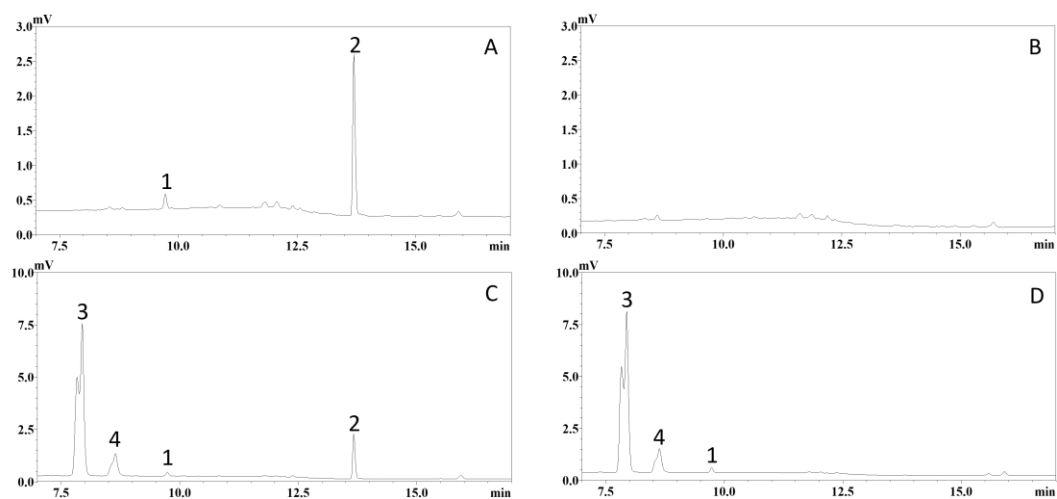


Figure S5. Representative chromatograms of mouse kidney homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank kidney homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse kidney homogenate; (C) kidney sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) with internal standard; and (D) kidney sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

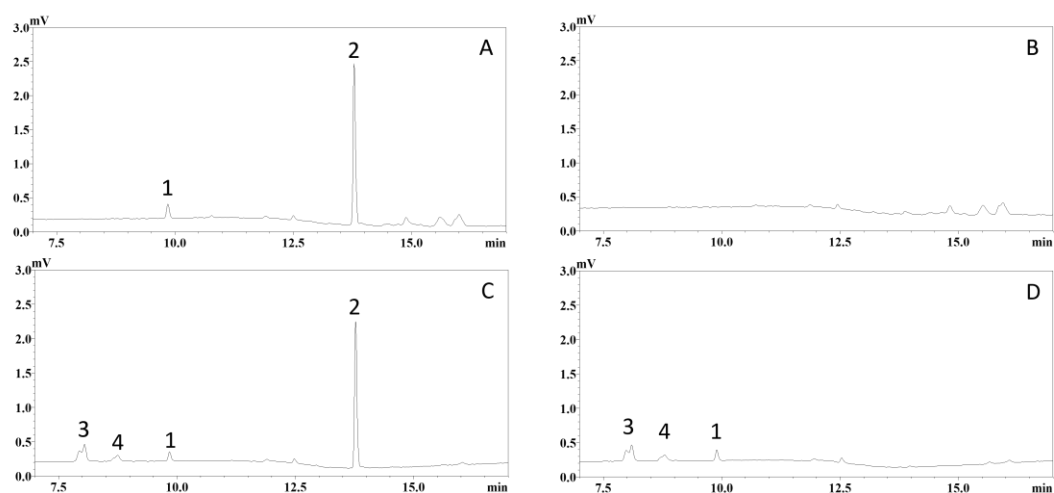


Figure S6. Representative chromatograms of mouse large intestine homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank large intestine homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse large intestine homogenate; (C) large intestine sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) with internal standard; and (D) large intestine sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

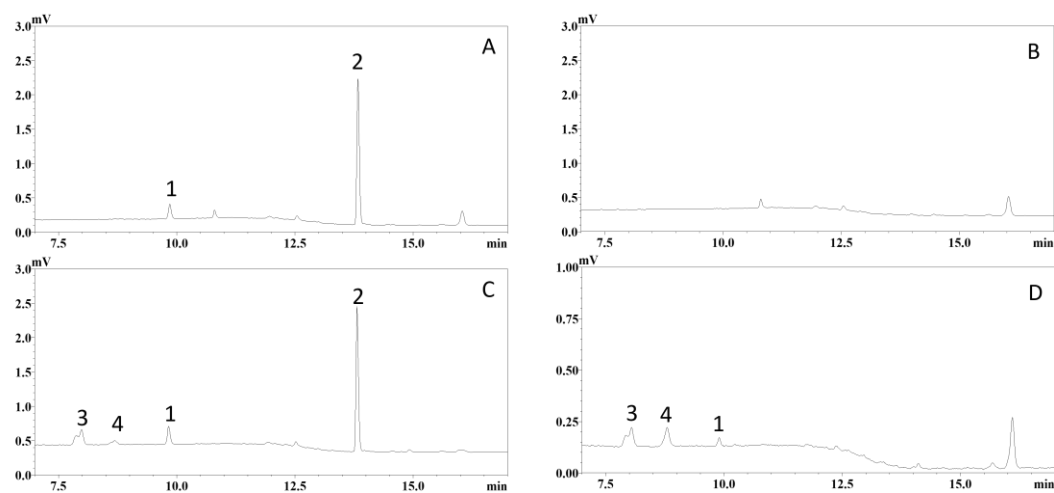


Figure S7. Representative chromatograms of mouse fat homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank fat homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse fat homogenate; (C) fat sample collected 20 minutes after oral administration of ISO (200 $\mu\text{mol/kg}$) with internal standard; and (D) fat sample collected 20 minutes after oral administration of ISO (200 $\mu\text{mol/kg}$) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

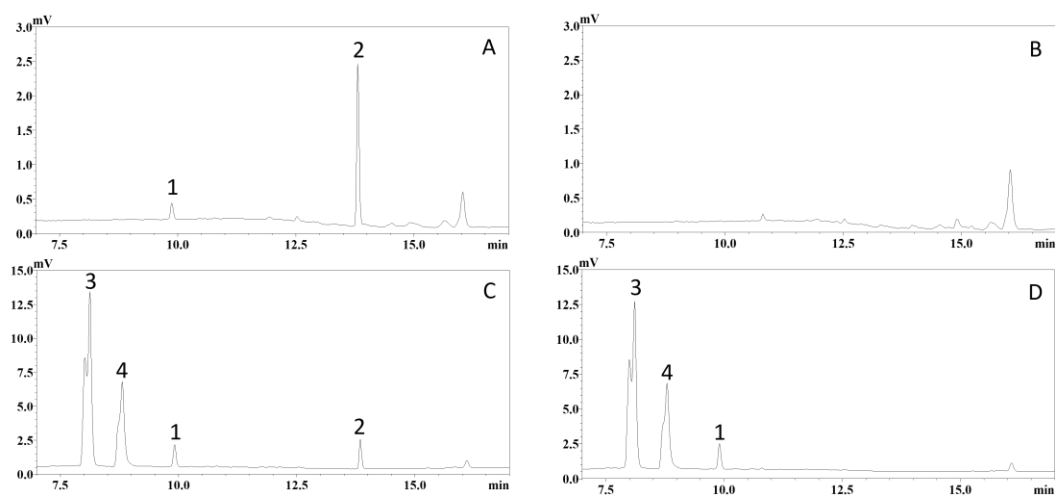


Figure S8. Representative chromatograms of mouse small intestine homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank small intestine homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse small intestine homogenate; (C) small intestine sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) with internal standard; and (D) small intestine sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

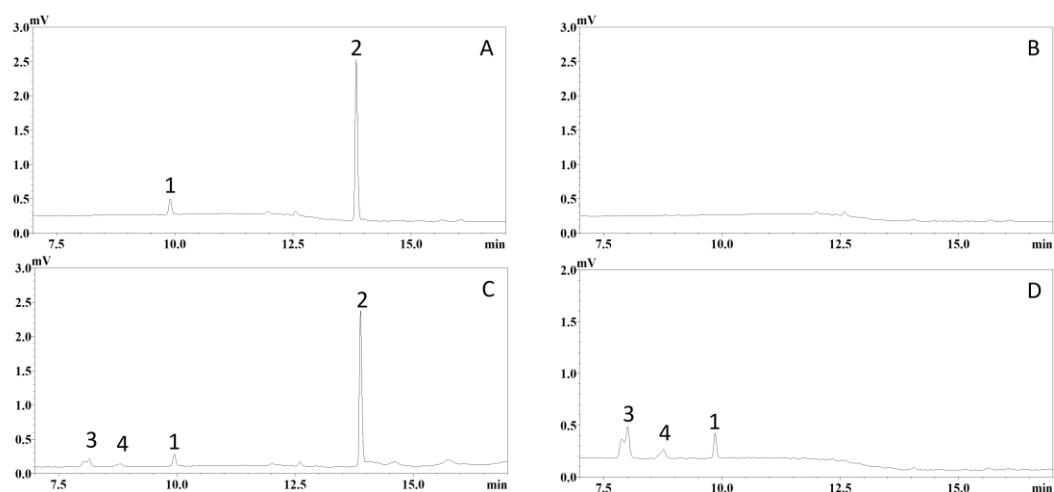


Figure S9. Representative chromatograms of mouse muscle homogenate samples. Ultraviolet absorbance at 325 nm was recorded for: (A) blank muscle homogenate spiked with ISO (corresponding to 75 ng/mL in homogenate and 450 ng/mL in tissue) and *trans*-stilbene (internal standard, corresponding to 1200 ng/mL in homogenate); (B) blank mouse muscle homogenate; (C) muscle sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) with internal standard; and (D) muscle sample collected 20 minutes after oral administration of ISO (200 μ mol/kg) without internal standard. Peaks: 1, ISO; 2, internal standard; 3 and 4, unidentified metabolites.

Table S1-Accuracy and precision of ISO in tissue homogenates

Matrices	Concentration (ng/mL)	Intra-day(n=6)		
		Observed Concentration (Mean $\pm$ SD, ng/mL)	Precision (RSD%)	Mean Accuracy (%)
Heart	15.0	16.5 $\pm$ 1.2	7.5	109.9
	45.0	47.2 $\pm$ 1.9	4.0	104.9
	175	184.2 $\pm$ 2.9	1.6	105.2
	800	817.2 $\pm$ 35.2	4.3	102.2
	1600	1746.8 $\pm$ 45.0	2.6	109.2
Kidney	15.0	15.4 $\pm$ 1.0	6.5	102.9
	45.0	46.6 $\pm$ 1.6	3.4	103.5
	175	174.2 $\pm$ 5.0	2.9	99.5
	800	843.8 $\pm$ 20.4	2.4	105.5
	1600	1555.2 $\pm$ 36.3	2.3	97.2
Brain	15.0	16.5 $\pm$ 1.6	9.8	109.9
	45.0	48.7 $\pm$ 2.3	4.8	108.2
	175	183.7 $\pm$ 10.3	5.6	105.0
	800	822.8 $\pm$ 51.5	6.3	102.9
	1600	1643.3 $\pm$ 34.5	2.1	102.7
Spleen	15.0	13.1 $\pm$ 1.3	9.7	87.6
	45.0	42.1 $\pm$ 1.8	4.4	93.5
	175	177 $\pm$ 3.6	2.0	101.1
	800	797.8 $\pm$ 12.2	1.5	99.7
	1600	1648.5 $\pm$ 25.7	1.6	103.0
Stomach	15.0	14.6 $\pm$ 1.2	8.0	97.6
	45.0	44.7 $\pm$ 2.0	4.4	99.4
	175	168.7 $\pm$ 6.4	3.8	96.4
	800	798.7 $\pm$ 27.1	3.4	99.8
	1600	1561.5 $\pm$ 49.9	3.2	97.6
Lung	15.0	16.4 $\pm$ 1.2	7.3	109.2
	45.0	47.7 $\pm$ 2.8	5.8	106.0
	175	183.3 $\pm$ 4.7	2.6	104.8
	800	833.8 $\pm$ 10.6	1.3	104.2
	1600	1626 $\pm$ 34.4	2.1	101.6
Fat	15.0	15.4 $\pm$ 1.0	6.3	102.7
	45.0	48.6 $\pm$ 2.1	4.4	107.9
	175	163.7 $\pm$ 1.5	0.9	93.5
	800	826.3 $\pm$ 16.3	2.0	103.3
	1600	1711.7 $\pm$ 71.1	4.2	107.0

Table S1-Continued

Biosample	Concentration (ng/mL)	Intra-day(n=6)		
		Observed Concentration (Mean $\pm$ SD, ng/mL)	Precision (RSD%)	Mean Accuracy (%)
Small Intestine	15.0	15.3 $\pm$ 1.5	9.9	101.7
	45.0	47.4 $\pm$ 2.0	4.1	105.3
	175	182.0 $\pm$ 2.3	1.3	104.0
	800	788.2 $\pm$ 19.0	2.4	98.5
	1600	1583.0 $\pm$ 18.2	1.2	98.9
Large Intestine	15.0	14.6 $\pm$ 4.1	27.8	97.4
	45.0	47.2 $\pm$ 2.3	4.8	104.9
	175	178.2 $\pm$ 1.7	1.0	101.8
	800	771.2 $\pm$ 21.9	2.8	96.4
	1600	1547.2 $\pm$ 13.1	0.9	96.7
Muscle	15.0	15.6 $\pm$ 0.8	5.2	103.8
	45.0	46.1 $\pm$ 1.2	2.6	102.5
	175	173.4 $\pm$ 15.2	8.8	99.1
	800	766.0 $\pm$ 37.8	4.9	95.8
	1600	1428.5 $\pm$ 22.5	1.6	89.3