

## Supplementary Material

### **Pharmacokinetics and tissue distribution of gingerols and shogaols from ginger (*Zingiber officinale* Rosc.) in rats by UPLC-Q-Exactive-HRMS**

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Table S1: Summary of regression equations, linear ranges, correlation coefficients and LLOQ of eight analytes in rat plasma and tissues.

Analytes	Plasma/tissues	Regression equation	Linear range (ng/mL)	r	LLOQ (ng/mL)
6-gingerol	Plasma	$Y=4.4\times 10^{-3}X+2.4\times 10^{-3}$	2.0-500.0	0.9992	2.0
	Heart	$Y=6.1\times 10^{-4}X+1.9\times 10^{-3}$	2.0-500.0	0.9963	2.0
	Liver	$Y=3.8\times 10^{-4}X+4.8\times 10^{-3}$	2.0-500.0	0.9982	2.0
	Spleen	$Y=7.7\times 10^{-4}X+5.1\times 10^{-3}$	2.0-500.0	0.9995	2.0
	Lung	$Y=5.8\times 10^{-4}X+2.4\times 10^{-3}$	2.0-500.0	0.9946	2.0
	Kidney	$Y=9.9\times 10^{-4}X+2.2\times 10^{-3}$	2.0-500.0	0.9976	2.0
	Stomach	$Y=5.3\times 10^{-4}X+9.2\times 10^{-3}$	39.9-5000.0	0.9995	39.9
	Intestine	$Y=8.3\times 10^{-4}X+1.0\times 10^{-2}$	15.6-2000.0	0.9970	15.6
	Brain	$Y=5.0\times 10^{-4}X+1.1\times 10^{-2}$	2.0-500.0	0.9976	2.0
6-shogaol	Plasma	$Y=1.9\times 10^{-3}X+1.4\times 10^{-3}$	2.0-500.0	0.9988	2.0
	Heart	$Y=2.7\times 10^{-3}X+1.3\times 10^{-3}$	2.0-500.0	0.9964	2.0
	Liver	$Y=1.9\times 10^{-3}X+1.9\times 10^{-3}$	2.0-500.0	0.9957	2.0
	Spleen	$Y=3.3\times 10^{-3}X+1.5\times 10^{-3}$	2.0-500.0	0.9948	2.0
	Lung	$Y=1.9\times 10^{-3}X+5.5\times 10^{-3}$	2.0-500.0	0.9961	2.0
	Kidney	$Y=4.3\times 10^{-3}X+6.5\times 10^{-3}$	2.0-500.0	0.9987	2.0
	Stomach	$Y=2.3\times 10^{-3}X+4.5\times 10^{-3}$	39.9-5000.0	0.9991	39.9
	Intestine	$Y=4.8\times 10^{-3}X+2.4\times 10^{-3}$	15.6-2000.0	0.9986	15.6
	Brain	$Y=1.8\times 10^{-3}X+2.9\times 10^{-3}$	2.0-500.0	0.9954	2.0
8-gingerol	Plasma	$Y=1.2\times 10^{-3}X+2.8\times 10^{-4}$	2.0-500.0	0.9946	2.0
	Heart	$Y=3.0\times 10^{-4}X+2.9\times 10^{-3}$	2.0-500.0	0.9910	2.0
	Liver	$Y=4.9\times 10^{-4}X-3.2\times 10^{-3}$	2.0-500.0	0.9949	2.0
	Spleen	$Y=3.0\times 10^{-4}X-2.8\times 10^{-3}$	2.0-500.0	0.9941	2.0
	Lung	$Y=4.9\times 10^{-4}X-5.7\times 10^{-3}$	2.0-500.0	0.9943	2.0
	Kidney	$Y=2.3\times 10^{-4}X-5.6\times 10^{-4}$	2.0-500.0	0.9960	2.0

8-shogaol	Stomach	$Y=8.2 \times 10^{-4}X - 2.1 \times 10^{-3}$	39.9-5000.0	0.9941	39.9
	Intestine	$Y=4.6 \times 10^{-4}X + 1.4 \times 10^{-3}$	15.6-2000.0	0.9952	15.6
	Brain	$Y=5.8 \times 10^{-4}X + 2.6 \times 10^{-3}$	2.0-500.0	0.9960	2.0
	Plasma	$Y=6.2 \times 10^{-4}X + 1.1 \times 10^{-3}$	2.0-500.0	0.9941	2.0
	Heart	$Y=4.4 \times 10^{-4}X + 2.6 \times 10^{-3}$	2.0-500.0	0.9986	2.0
	Liver	$Y=4.2 \times 10^{-4}X + 5.1 \times 10^{-3}$	2.0-500.0	0.9925	2.0
	Spleen	$Y=6.7 \times 10^{-4}X - 1.9 \times 10^{-3}$	2.0-500.0	0.9938	2.0
	Lung	$Y=5.8 \times 10^{-4}X + 3.7 \times 10^{-3}$	2.0-500.0	0.9994	2.0
	Kidney	$Y=3.6 \times 10^{-4}X + 2.1 \times 10^{-3}$	2.0-500.0	0.9968	2.0
	Stomach	$Y=3.9 \times 10^{-4}X + 2.6 \times 10^{-3}$	39.9-5000.0	0.9956	39.9
10-gingerol	Intestine	$Y=5.6 \times 10^{-4}X - 1.7 \times 10^{-3}$	15.6-2000.0	0.9984	15.6
	Brain	$Y=4.7 \times 10^{-4}X - 2.2 \times 10^{-3}$	2.0-500.0	0.9928	2.0
	Plasma	$Y=1.3 \times 10^{-3}X + 3.7 \times 10^{-3}$	2.0-500.0	0.9996	2.0
	Heart	$Y=4.0 \times 10^{-4}X - 1.5 \times 10^{-4}$	2.0-500.0	0.9910	2.0
	Liver	$Y=3.7 \times 10^{-4}X + 6.1 \times 10^{-4}$	2.0-500.0	0.9937	2.0
	Spleen	$Y=5.6 \times 10^{-4}X - 2.5 \times 10^{-4}$	2.0-500.0	0.9942	2.0
	Lung	$Y=4.4 \times 10^{-4}X + 6.8 \times 10^{-4}$	2.0-500.0	0.9963	2.0
	Kidney	$Y=4.0 \times 10^{-4}X - 1.5 \times 10^{-4}$	2.0-500.0	0.9969	2.0
	Stomach	$Y=3.0 \times 10^{-4}X + 4.8 \times 10^{-3}$	39.9-5000.0	0.9942	39.9
	Intestine	$Y=3.9 \times 10^{-4}X + 3.2 \times 10^{-3}$	15.6-2000.0	0.9943	15.6
10-shogaol	Brain	$Y=2.9 \times 10^{-4}X + 6.5 \times 10^{-3}$	2.0-500.0	0.9950	2.0
	Plasma	$Y=1.8 \times 10^{-6}X - 2.3 \times 10^{-6}$	1.0-250.0	0.9985	1.0
	Heart	$Y=2.3 \times 10^{-6}X + 4.3 \times 10^{-5}$	1.0-250.0	0.9965	1.0
	Liver	$Y=2.8 \times 10^{-6}X - 2.0 \times 10^{-5}$	1.0-250.0	0.9937	1.0
	Spleen	$Y=2.4 \times 10^{-6}X + 1.7 \times 10^{-5}$	1.0-250.0	0.9991	1.0
	Lung	$Y=1.6 \times 10^{-6}X + 3.7 \times 10^{-5}$	1.0-250.0	0.9963	1.0

Zingerone	Kidney	$Y=4.4 \times 10^{-6}X+6.7 \times 10^{-5}$	1.0-250.0	0.9948	1.0
	Stomach	$Y=2.8 \times 10^{-6}X+2.1 \times 10^{-5}$	15.6-2000.0	0.9918	15.6
	Intestine	$Y=2.9 \times 10^{-6}X+2.7 \times 10^{-5}$	15.6-2000.0	0.9941	15.6
	Brain	$Y=4.9 \times 10^{-6}X-1.9 \times 10^{-5}$	1.0-250.0	0.9966	1.0
	Plasma	$Y=6.5 \times 10^{-3}X+3.3 \times 10^{-2}$	2.0-500.0	0.9977	2.0
	Heart	$Y=5.5 \times 10^{-4}X+5.7 \times 10^{-3}$	2.0-500.0	0.9984	2.0
	Liver	$Y=3.4 \times 10^{-4}X-2.7 \times 10^{-3}$	2.0-500.0	0.9990	2.0
	Spleen	$Y=4.4 \times 10^{-4}X+5.6 \times 10^{-3}$	2.0-500.0	0.9994	2.0
	Lung	$Y=5.1 \times 10^{-4}X-4.2 \times 10^{-3}$	2.0-500.0	0.9934	2.0
	Kidney	$Y=4.9 \times 10^{-4}X+4.4 \times 10^{-3}$	2.0-500.0	0.9954	2.0
6-isodehydrogingenone	Stomach	$Y=4.0 \times 10^{-4}X+8.5 \times 10^{-3}$	39.9-5000.0	0.9992	39.9
	Intestine	$Y=4.5 \times 10^{-4}X-1.0 \times 10^{-2}$	15.6-2000.0	0.9953	15.6
	Brain	$Y=2.9 \times 10^{-4}X+8.4 \times 10^{-3}$	2.0-500.0	0.9970	2.0
	Plasma	$Y=1.3 \times 10^{-2}X-1.2 \times 10^{-2}$	1.0-250.0	0.9988	1.0
	Heart	$Y=4.8 \times 10^{-2}X+1.7 \times 10^{-2}$	1.0-250.0	0.9994	1.0
	Liver	$Y=2.3 \times 10^{-2}X-4.2 \times 10^{-3}$	1.0-250.0	0.9944	1.0
	Spleen	$Y=3.8 \times 10^{-2}X+1.9 \times 10^{-2}$	1.0-250.0	0.9931	1.0
	Lung	$Y=5.8 \times 10^{-2}X+1.2 \times 10^{-2}$	1.0-250.0	0.9954	1.0
	Kidney	$Y=3.4 \times 10^{-2}X+6.8 \times 10^{-3}$	1.0-250.0	0.9941	1.0
	Stomach	$Y=6.5 \times 10^{-3}X-1.4 \times 10^{-3}$	7.8-2000.0	0.9985	7.8
Intestine	$Y=8.9 \times 10^{-2}X+3.1 \times 10^{-2}$	7.8-2000.0	0.9958	7.8	
Brain	$Y=4.8 \times 10^{-3}X+2.2 \times 10^{-2}$	1.0-250.0	0.9927	1.0	

X represented the concentration (ng/mL) and Y represented the area ratio.

Table S2: The intra-day and inter-day precisions and accuracies, extraction recoveries, matrix effects of the eight analytes in rat plasma and tissues (n = 6).

Analytes	Plasma/ tissues	C <sub>nom</sub> (ng/mL)	Intra-day			Inter-day			Extraction recovery Mean ± S.D. (%)	Matrix effect Mean ± S.D. (%)
			C <sub>obs</sub> (ng/mL)	Precision (RSD%)	Accuracy (RE%)	C <sub>obs</sub> (ng/mL)	Precision (RSD%)	Accuracy (RE%)		
6-gingerol	Plasma	62.5	66.8	4.8	6.9	68.0	5.3	8.7	103.8±3.9	95.3±5.5
		250.0	242.8	2.6	-2.9	245.1	2.5	-2.0	94.6±4.3	97.2±2.3
		500.0	485.4	3.8	-2.9	484.7	3.7	-3.1	96.9±5.4	100.5±4.6
	Heart	62.5	66.4	3.7	6.2	67.6	4.9	8.2	107.4±3.9	97.2±5.6
		250.0	246.4	2.9	-1.5	245.8	2.6	-1.7	97.2±2.0	96.2±2.1
		500.0	488.7	5.8	-2.3	487.0	4.6	-2.6	97.0±4.2	97.7±5.1
	Liver	62.5	66.2	3.4	5.9	66.9	4.9	7.0	97.3±3.4	98.1±5.7
		250.0	243.5	3.1	-2.6	245.3	2.8	-1.9	97.4±2.0	96.6±2.6
		500.0	488.7	4.8	-2.3	486.9	3.9	-2.6	97.3±3.4	100.9±5.0
	Spleen	62.5	66.2	3.4	5.9	67.2	4.0	7.5	107.8±4.0	98.5±4.0
		250.0	244.3	3.6	-2.3	245.1	2.5	-2.0	98.3±2.0	95.6±1.5
		500.0	491.3	3.7	-1.7	488.4	4.1	-2.3	97.1±4.1	100.4±4.7
	Lung	62.5	65.5	6.2	4.8	67.1	6.1	7.3	107.0±5.8	101.1±4.8
		250.0	243.8	3.3	-2.5	245.8	2.9	-1.7	98.0±2.5	93.9±5.3
		500.0	486.7	4.2	-2.7	486.3	4.2	-2.8	98.3±3.7	95.9±2.2
	Kidney	62.5	66.2	3.4	5.9	67.5	4.7	8.0	107.5±4.3	101.0±4.5
		250.0	243.8	3.3	-2.5	245.8	2.6	-1.7	98.0±2.5	99.5±5.4
		500.0	486.6	4.1	-2.7	485.8	4.0	-2.8	96.3±3.5	97.1±2.7
	Stomach	62.5	66.5	5.5	6.4	67.8	5.8	8.4	109.8±6.2	100.2±4.4
		250.0	243.2	3.6	-2.7	245.5	2.9	-1.8	99.3±2.6	96.1±6.8
		500.0	482.4	4.7	-3.5	482.9	4.1	-3.4	97.1±3.5	97.0±3.2
Intestine	62.5	66.2	3.3	5.9	67.7	5.1	8.2	109.2±4.7	100.8±4.0	

6-shogaol	Brain	250.0	244.5	3.7	-2.2	245.2	2.9	-1.9	98.2±2.7	99.9±5.7
		500.0	484.7	4.1	-3.1	485.0	4.0	-3.0	96.8±3.6	96.2±2.7
		62.5	66.4	8.4	6.2	67.9	6.6	8.6	109.8±6.1	98.3±3.6
	Plasma	250.0	242.9	3.7	-2.8	245.0	3.0	-2.0	98.4±2.6	96.3±5.0
		500.0	481.3	5.0	-3.7	482.9	4.2	-3.4	96.7±3.7	97.2±2.9
		62.5	63.7	2.1	1.9	63.9	2.3	2.2	102.3±1.7	98.0±1.5
	Heart	250.0	245.1	3.5	-2.0	247.1	5.1	-1.2	97.8±4.0	96.3±4.7
		500.0	481.7	4.0	-3.7	486.1	4.2	-2.8	94.1±4.1	99.4±4.9
		62.5	63.0	2.1	0.8	63.4	2.7	1.5	101.5±2.6	98.2±2.8
	Liver	250.0	243.7	3.2	-2.5	246.3	4.9	-1.5	98.9±5.1	96.5±4.5
		500.0	490.2	3.7	-2.0	488.2	4.3	-2.4	97.2±3.7	96.9±4.0
		62.5	63.4	4.4	1.4	64.0	3.4	2.4	101.1±2.9	96.5±3.3
	Spleen	250.0	245.4	3.0	-1.8	248.3	4.7	-0.7	97.9±4.0	97.3±4.7
		500.0	488.3	3.8	-2.3	487.3	4.0	-2.5	96.9±4.1	100.1±4.7
		62.5	64.0	2.9	2.4	64.0	2.5	2.4	102.5±2.5	98.2±5.4
	Lung	250.0	246.7	3.5	-1.3	246.6	4.4	-1.4	97.9±3.6	96.0±2.2
		500.0	482.7	4.3	-3.5	485.3	4.6	-2.9	97.0±4.5	95.1±3.5
		62.5	64.0	2.1	2.4	63.9	2.1	2.2	101.8±2.2	99.3±4.3
	Kidney	250.0	244.4	3.9	-2.2	246.5	5.4	-1.4	97.7±4.8	97.6±2.3
		500.0	483.3	4.2	-3.3	486.3	4.2	-2.7	97.6±3.5	95.5±4.8
62.5		63.4	2.7	1.4	63.6	2.8	1.7	102.3±2.0	100.4±4.6	
Stomach	250.0	245.7	3.9	-1.7	247.1	5.3	-1.2	99.3±4.3	96.9±3.1	
	500.0	476.5	5.0	-4.7	484.2	4.5	-3.2	95.9±4.2	96.4±6.0	
	62.5	63.3	3.1	1.2	63.7	2.8	1.9	103.4±1.4	101.5±3.5	
		250.0	244.1	4.4	-2.4	246.5	5.4	-1.4	100.6±4.9	98.1±2.8
		500.0	481.1	4.6	-3.8	486.6	4.5	-2.7	98.5±3.9	97.5±5.8

8-gingerol	Intestine	62.5	64.1	3.1	2.6	64.1	2.7	2.6	102.3±3.1	97.4±4.9
		250.0	244.3	4.6	-2.3	246.7	5.2	-1.3	97.7±5.0	96.9±2.2
		500.0	480.6	5.6	-3.9	484.3	4.9	-3.1	95.1±4.5	97.1±5.4
	Brain	62.5	62.6	1.9	0.2	63.3	3.2	1.3	101.9±3.4	97.7±5.1
		250.0	243.6	4.3	-2.5	246.4	5.5	-1.5	99.1±5.6	100.1±4.0
		500.0	477.1	5.7	-4.6	485.6	5.0	-2.9	98.0±4.4	95.2±5.4
	Plasma	62.5	60.9	5.8	-2.5	61.7	4.6	-1.3	96.9±3.5	93.4±4.1
		250.0	255.5	2.6	2.2	256.3	2.3	2.5	101.5±1.8	96.9±2.3
		500.0	478.2	2.2	-4.4	488.4	3.3	-2.3	97.9±3.6	99.6±3.9
	Heart	62.5	60.6	6.3	-3.0	61.5	5.0	-1.7	98.0±5.1	92.9±4.4
		250.0	257.5	3.8	3.0	257.6	3.1	3.0	102.9±2.9	94.9±2.8
		500.0	472.9	3.2	-5.4	487.7	4.2	-2.5	94.1±2.7	98.4±4.5
	Liver	62.5	60.3	5.5	-3.6	61.8	4.6	-1.1	98.3±3.2	95.4±4.5
		250.0	254.8	2.2	1.9	256.4	2.5	2.6	101.9±1.7	97.8±2.8
		500.0	484.9	2.8	-3.0	491.7	3.2	-1.7	98.9±3.0	100.6±3.8
	Spleen	62.5	60.6	6.4	-3.0	61.7	5.1	-1.3	99.2±4.0	98.3±4.1
		250.0	254.5	3.1	1.8	257.1	2.4	2.8	103.3±2.0	93.9±3.8
		500.0	481.6	3.3	-3.7	490.6	3.7	-1.9	99.0±3.5	97.9±2.0
	Lung	62.5	60.6	6.4	-3.0	61.0	5.9	-2.4	96.7±5.7	96.9±3.5
		250.0	256.8	3.4	2.7	257.2	2.9	2.9	102.6±2.5	91.7±4.9
		500.0	481.6	3.3	-3.7	488.4	3.4	-2.3	97.9±3.0	95.2±1.9
	Kidney	62.5	60.3	7.0	-3.6	61.1	5.8	-2.2	98.0±5.2	98.5±3.5
		250.0	254.6	3.1	1.8	255.6	2.7	2.3	102.4±2.6	93.5±6.3
		500.0	479.5	2.6	-4.1	487.7	3.5	-2.5	96.9±2.9	97.2±2.9
Stomach	62.5	60.6	6.4	-3.1	61.4	5.2	-1.8	100.0±4.8	97.7±4.0	
	250.0	254.7	3.0	1.9	255.7	2.7	2.3	102.9±2.7	94.3±5.4	

8-shogaol	Intestine	500.0	477.2	3.9	-4.6	488.2	3.8	-2.4	99.3±2.9	97.0±3.0
		62.5	60.1	7.3	-3.8	61.3	5.5	-2.0	98.7±4.5	97.9±4.3
		250.0	255.8	2.8	2.3	256.1	2.6	2.4	102.8±2.5	94.2±5.7
	Brain	500.0	473.9	4.4	-5.2	485.9	4.2	-2.8	98.4±3.2	97.3±2.4
		62.5	60.4	6.8	-3.4	61.3	5.5	-2.0	98.7±4.8	96.3±3.4
		250.0	255.7	3.5	2.3	256.2	2.5	2.5	102.6±2.1	95.4±4.4
	Plasma	500.0	477.0	5.6	-4.6	486.7	4.4	-2.7	98.3±3.5	96.9±1.9
		15.6	15.9	11.4	1.5	15.8	9.5	1.1	102.3±8.2	112.7±9.6
		125.0	118.3	7.8	-5.4	121.3	5.8	-3.0	95.5±4.6	93.3±5.7
	Heart	250.0	259.0	5.4	3.6	259.4	4.4	3.7	104.2±4.5	99.4±4.7
		15.6	15.5	8.3	-0.7	15.8	9.9	1.1	101.4±9.5	111.7±8.3
		125.0	117.9	7.3	-5.7	121.0	5.6	-3.2	95.9±5.2	93.6±5.9
	Liver	250.0	257.4	4.7	2.9	258.6	4.2	3.4	103.5±4.0	98.9±4.7
		15.6	16.2	11.3	3.6	16.0	9.2	2.5	105.6±8.2	111.5±8.3
		125.0	121.6	7.5	-2.7	123.5	5.5	-1.2	98.8±3.9	95.9±5.7
	Spleen	250.0	256.7	4.4	2.7	257.5	3.7	3.0	101.7±3.8	98.3±3.8
		15.6	16.5	12.2	5.8	16.1	10.0	3.3	102.0±9.0	112.9±10.0
		125.0	121.6	5.7	-2.7	123.5	4.4	-1.2	99.8±3.8	95.2±4.8
	Lung	250.0	256.7	4.4	2.7	257.9	4.5	3.2	103.4±4.7	97.3±5.3
		15.6	16.2	8.7	3.6	16.0	8.8	2.3	103.1±8.3	105.9±9.3
		125.0	120.6	6.0	-3.5	121.8	4.9	-2.5	96.3±4.3	93.0±3.8
	Kidney	250.0	258.4	5.3	3.3	258.9	4.3	3.6	103.3±4.4	99.6±4.8
		15.6	16.2	14.2	3.4	16.0	10.0	2.3	102.9±9.9	113.6±11.9
		125.0	119.4	7.3	-4.5	121.5	5.7	-2.8	97.9±5.5	93.1±5.8
Stomach	250.0	259.4	5.4	3.7	259.4	4.5	3.7	103.9±4.2	98.4±4.9	
	15.6	15.6	8.7	-0.4	15.6	9.6	0.1	96.6±8.5	107.9±10.1	



		125.0	119.1	7.4	-4.8	121.5	6.1	-2.8	100.2±4.2	94.4±6.6
		250.0	258.7	5.6	3.5	258.9	4.7	3.6	105.1±3.1	100.2±4.3
	Intestine	15.6	15.4	9.0	-1.5	15.5	10.0	-0.6	101.1±10.8	110.7±11.1
		125.0	119.5	6.8	-4.4	121.7	5.3	-2.6	97.2±4.7	94.9±5.3
		250.0	258.9	4.8	3.5	259.0	4.1	3.6	102.1±4.0	98.8±4.0
	Brain	15.6	15.5	11.1	-0.6	15.8	10.1	0.8	101.6±9.8	113.4±12.3
		125.0	118.8	8.5	-5.0	121.5	6.3	-2.8	98.3±4.9	94.0±5.6
		250.0	257.3	6.5	2.9	258.5	4.9	3.4	103.7±4.3	96.7±4.9
10-gingerol	Plasma	62.5	65.9	4.0	5.5	66.0	3.4	5.6	104.0±2.9	95.2±3.2
		250.0	252.7	4.1	1.1	253.0	5.1	1.2	95.9±3.4	95.1±4.1
		500.0	484.5	2.9	-3.1	504.8	3.7	1.0	98.7±5.8	101.5±4.0
	Heart	62.5	63.9	3.2	2.3	64.7	3.5	3.5	103.6±3.6	104.9±3.7
		250.0	249.7	4.1	-0.1	251.4	4.8	0.5	100.7±4.5	95.4±5.2
		500.0	481.2	2.6	-3.8	503.3	3.9	0.7	100.3±4.2	101.1±4.2
	Liver	62.5	65.6	3.4	4.9	65.4	2.5	4.6	104.2±1.9	96.1±2.3
		250.0	252.7	4.1	1.1	251.6	4.4	0.6	99.4±4.2	94.5±2.9
		500.0	487.2	3.4	-2.6	504.0	3.4	0.8	102.1±2.1	101.2±3.4
	Spleen	62.5	64.6	2.4	3.3	65.1	2.9	4.2	104.7±3.0	103.1±2.0
		250.0	252.4	2.8	0.9	253.1	5.0	1.3	100.7±4.9	102.1±3.1
		500.0	487.2	3.4	-2.6	504.6	3.5	0.9	101.6±2.0	95.9±4.9
	Lung	62.5	64.6	5.2	3.3	65.2	3.5	4.4	104.5±4.1	99.0±4.4
		250.0	254.0	5.0	1.6	253.7	5.4	1.5	100.5±5.5	94.6±3.5
		500.0	484.5	2.9	-3.1	493.9	4.0	-1.2	97.2±3.6	92.9±4.9
	Kidney	62.5	66.2	4.7	6.0	66.2	3.7	6.0	105.8±3.6	101.7±4.5
		250.0	252.2	4.3	0.9	252.4	5.4	1.0	102.2±3.8	95.6±3.7
		500.0	482.3	2.6	-3.5	503.7	3.8	0.7	99.8±3.8	94.7±6.0

10-shogaol	Stomach	62.5	65.5	3.3	4.9	65.9	3.3	5.4	105.7±3.5	101.5±5.0
		250.0	253.4	4.5	1.4	253.0	5.3	1.2	103.4±4.5	97.7±3.9
		500.0	482.0	4.2	-3.6	503.6	4.2	0.7	102.1±2.5	94.9±5.8
	Intestine	62.5	66.6	4.6	6.6	66.0	3.3	5.6	106.1±3.0	102.1±5.1
		250.0	252.0	4.4	0.8	252.6	5.3	1.0	100.0±5.4	96.4±3.2
		500.0	481.5	4.0	-3.7	502.4	4.4	0.5	101.0±3.1	96.8±4.4
	Brain	62.5	65.6	5.0	4.9	65.6	4.6	4.9	104.9±4.7	103.8±2.6
		250.0	251.6	4.6	0.7	252.4	5.4	1.0	101.1±5.7	97.4±2.6
		500.0	481.1	4.5	-3.8	504.0	4.4	0.8	103.1±2.0	95.8±5.7
	Plasma	15.6	14.9	3.0	-4.9	15.2	6.7	-2.7	93.7±2.9	97.9±6.0
		125.0	118.3	2.0	-5.4	118.8	5.0	-5.0	90.2±4.3	97.9±5.5
		250.0	245.4	1.5	-1.8	247.5	3.9	-1.0	98.4±1.7	99.9±4.1
	Heart	15.6	15.2	3.3	-2.8	15.4	7.8	-1.3	98.5±7.4	102.5±8.6
		125.0	121.6	5.6	-2.7	121.0	5.9	-3.2	96.9±6.0	100.8±7.2
		250.0	245.1	1.7	-2.0	247.0	4.1	-1.2	99.4±4.1	99.0±4.9
	Liver	15.6	14.5	6.2	-7.0	15.2	7.5	-2.7	97.2±6.0	97.9±7.4
		125.0	119.6	3.1	-4.3	120.1	4.2	-3.9	95.4±3.0	99.5±4.8
		250.0	247.1	2.5	-1.2	247.0	3.1	-1.2	97.9±2.4	97.3±2.5
	Spleen	15.6	15.3	6.1	-1.9	15.1	6.0	-3.2	98.5±5.8	92.2±5.5
		125.0	118.6	6.5	-5.1	119.5	5.3	-4.4	96.0±4.6	94.1±4.4
		250.0	243.1	3.1	-2.8	246.5	4.0	-1.4	99.0±4.0	99.3±4.4
	Lung	15.6	15.5	10.7	-0.8	15.5	9.2	-0.7	99.3±7.9	86.3±6.1
		125.0	116.9	3.9	-6.5	118.1	5.6	-5.5	93.6±4.6	96.6±5.1
		250.0	243.4	2.9	-2.6	247.1	4.1	-1.2	97.6±2.6	98.0±2.8
Kidney	15.6	14.6	5.1	-6.4	15.2	7.7	-3.0	95.8±6.8	100.0±9.0	
	125.0	117.5	3.0	-6.0	118.5	4.9	-5.2	95.1±3.8	99.0±5.8	

Zingerone	Stomach	250.0	244.8	1.9	-2.1	247.1	4.1	-1.2	99.6±3.8	99.4±5.1
		15.6	14.6	5.4	-6.5	15.0	8.7	-4.2	95.4±7.6	97.6±10.5
		125.0	118.6	4.9	-5.1	118.7	5.7	-5.0	95.9±5.8	95.1±6.5
	Intestine	250.0	243.1	3.1	-2.8	246.4	4.2	-1.5	100.3±3.3	99.2±5.2
		15.6	14.6	5.1	-6.4	15.1	7.7	-3.6	100.0±5.8	95.0±7.2
		125.0	118.9	5.3	-4.9	118.9	5.7	-4.9	95.6±5.3	95.8±5.3
	Brain	250.0	243.4	2.9	-2.6	246.5	4.4	-1.4	98.7±4.5	100.1±4.6
		15.6	15.0	9.2	-4.2	15.3	8.6	-2.1	99.0±8.0	92.0±9.2
		125.0	117.5	3.2	-6.0	118.7	5.4	-5.1	95.4±5.7	100.5±5.2
	Plasma	250.0	244.4	2.2	-2.2	246.7	4.4	-1.3	99.1±4.8	99.8±5.2
		62.5	63.6	5.9	1.8	64.4	5.1	3.0	103.5±4.3	108.0±4.5
		250.0	244.1	1.8	-2.4	245.6	1.2	-1.8	98.1±1.1	99.3±1.4
	Heart	500.0	484.2	2.8	-3.2	487.6	4.0	-2.5	97.7±4.5	100.2±4.8
		62.5	64.3	4.5	2.8	64.5	4.4	3.2	103.1±4.5	104.2±3.9
		250.0	241.8	3.5	-3.3	244.0	2.4	-2.4	97.8±2.3	98.0±2.8
	Liver	500.0	486.2	3.3	-2.8	489.4	3.8	-2.1	97.1±3.1	101.1±4.0
		62.5	63.9	5.1	2.3	64.4	4.6	3.0	104.7±4.5	106.2±4.4
		250.0	245.4	2.5	-1.8	244.9	1.9	-2.1	97.2±1.6	97.0±1.9
	Spleen	500.0	487.5	3.7	-2.5	489.6	4.4	-2.1	97.4±4.8	100.8±5.2
		62.5	63.3	6.1	1.2	64.1	5.0	2.6	103.0±5.0	99.8±5.1
250.0		245.1	1.1	-2.0	246.6	1.5	-1.4	98.9±1.5	109.2±4.7	
Lung	500.0	486.6	3.4	-2.7	488.8	4.2	-2.2	98.5±4.2	99.6±1.9	
	62.5	63.4	6.0	1.5	64.2	5.2	2.7	102.1±5.2	100.4±4.5	
	250.0	244.4	2.0	-2.2	245.6	1.2	-1.8	97.8±1.2	107.2±5.1	
Kidney	500.0	486.2	3.3	-2.8	487.7	4.2	-2.5	97.3±3.1	98.4±1.2	
	62.5	63.3	6.1	1.2	64.5	5.1	3.2	103.2±4.8	101.2±4.0	

		250.0	242.4	3.0	-3.0	244.8	1.9	-2.1	98.0±2.0	107.7±5.0
		500.0	480.8	4.8	-3.8	485.8	4.5	-2.8	96.9±4.5	98.6±2.2
	Stomach	62.5	63.1	5.8	0.9	64.1	5.1	2.6	100.9±4.6	101.3±3.7
		250.0	243.2	3.3	-2.7	244.8	2.1	-2.1	99.0±0.5	107.5±4.5
		500.0	482.6	4.4	-3.5	486.0	4.7	-2.8	95.6±3.7	98.4±1.5
	Intestine	62.5	63.9	6.5	2.2	64.4	5.5	3.0	104.5±5.7	97.2±5.2
		250.0	243.0	3.0	-2.8	245.3	1.8	-1.9	97.8±2.0	107.3±5.7
		500.0	480.9	5.1	-3.8	486.5	4.8	-2.7	96.2±4.3	98.7±2.2
	Brain	62.5	63.8	7.0	2.1	64.1	5.9	2.6	102.9±5.6	97.6±5.5
		250.0	240.8	5.0	-3.7	243.9	3.0	-2.5	98.2±1.5	109.1±7.0
		500.0	482.0	5.7	-3.6	486.4	5.3	-2.7	97.7±5.0	97.2±3.5
6-isodehy	Plasma	15.6	14.6	5.2	-6.5	14.8	5.2	-5.1	93.5±4.5	95.5±5.8
drogingenone		125.0	120.3	5.7	-3.8	123.1	4.9	-1.6	98.1±4.6	100.3±5.8
		250.0	242.8	2.6	-2.9	245.1	2.5	-2.0	95.2±4.5	97.2±2.3
	Heart	15.6	14.6	5.2	-6.5	14.8	5.2	-5.1	94.3±3.9	94.4±4.9
		125.0	121.3	4.3	-3.0	123.1	4.3	-1.6	97.1±3.8	98.6±4.8
		250.0	246.2	2.6	-1.5	245.8	2.5	-1.7	97.3±2.1	96.7±2.3
	Liver	15.6	14.9	6.3	-4.4	14.8	6.8	-5.1	94.3±6.2	95.5±7.9
		125.0	121.3	6.6	-3.0	123.7	5.3	-1.0	97.5±5.3	101.1±6.2
		250.0	244.2	3.5	-2.3	246.1	3.0	-1.6	97.5±1.9	96.0±3.0
	Spleen	15.6	14.9	8.7	-4.4	15.1	7.2	-3.6	97.8±7.1	91.5±6.7
		125.0	122.3	2.8	-2.2	122.8	3.8	-1.7	98.5±4.0	98.9±4.7
		250.0	244.5	3.8	-2.2	246.2	3.1	-1.5	98.9±2.9	95.9±2.8
	Lung	15.6	14.3	9.1	-8.7	14.6	7.1	-6.5	91.4±5.9	91.7±5.7
		125.0	121.6	3.8	-2.7	122.4	4.1	-2.1	97.8±3.3	98.2±3.8
		250.0	240.8	3.6	-3.7	243.9	3.0	-2.4	97.1±2.9	96.4±2.8

Kidney	15.6	14.3	8.3	-8.3	14.8	8.6	-5.6	95.9±7.7	94.7±9.8
	125.0	120.8	5.4	-3.4	122.5	4.4	-2.0	98.2±4.4	99.3±5.2
	250.0	243.8	3.2	-2.5	245.5	2.7	-1.8	98.0±2.5	97.0±2.9
Stomach	15.6	14.5	10.8	-7.4	14.5	7.8	-7.0	94.6±7.0	88.1±6.8
	125.0	120.4	6.4	-3.7	123.1	4.8	-1.5	100.2±3.2	100.4±3.8
	250.0	242.6	3.5	-3.0	245.2	2.9	-1.9	99.2±2.5	97.2±3.1
Intestine	15.6	14.7	10.1	-6.0	14.9	7.0	-4.6	97.3±5.8	91.9±6.7
	125.0	119.9	7.4	-4.1	122.7	5.4	-1.8	98.2±5.9	99.5±6.3
	250.0	242.0	3.0	-3.2	244.6	2.6	-2.2	98.0±2.1	97.9±3.0
Brain	15.6	15.1	10.4	-3.4	14.9	8.5	-4.9	94.4±7.1	89.4±3.9
	125.0	120.3	7.2	-3.7	122.8	5.2	-1.8	99.2±4.1	98.4±6.2
	250.0	242.6	4.9	-3.0	244.7	3.3	-2.1	98.3±2.4	96.2±2.5

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Table S3: Stability of eight analytes in rat plasma and tissues under various conditions (n = 6).

Analytes	Plasma/tissues	C <sub>nom</sub> (ng/mL)	4 °C for 24 h		Three freeze-thaw cycles		Frozen at -20°C for 30 days	
			C <sub>obs</sub> (ng/mL)	R.E. (%)	C <sub>obs</sub> (ng/mL)	R.E. (%)	C <sub>obs</sub> (ng/mL)	R.E. (%)
6-gingerol	Plasma	62.5	66.7	6.7	68.1	8.9	68.2	9.2
		250.0	242.7	-2.9	246.1	-1.6	245.9	-1.6
		500.0	490.8	-1.9	485.7	-2.9	484.6	-3.1
	Heart	62.5	67.1	7.3	69.2	10.7	68.8	10.1
		250.0	244.8	-2.1	247.1	-1.2	247.7	-0.9
		500.0	483.1	-3.4	484.7	-3.1	476.1	-4.8
	Liver	62.5	66.0	5.6	68.8	10.0	68.7	10.0
		250.0	244.6	-2.2	248.7	-0.5	248.2	-0.7
		500.0	482.8	-3.5	483.3	-3.3	484.3	-3.1
	Spleen	62.5	66.4	6.2	67.4	7.9	67.9	8.7
		250.0	246.0	-1.6	249.3	-0.3	248.9	-0.5
		500.0	474.7	-5.1	478.3	-4.4	476.1	-4.8
	Lung	62.5	65.7	5.1	67.0	7.2	66.6	6.6
		250.0	244.3	-2.3	247.3	-1.1	246.4	-1.4
		500.0	487.3	-2.5	490.3	-1.9	485.2	-3.0
	Kidney	62.5	66.9	7.0	69.5	11.2	69.5	11.2
		250.0	247.7	-0.9	249.8	-0.1	248.3	-0.7
		500.0	491.5	-1.7	487.1	-2.6	491.0	-1.8
	Stomach	62.5	67.0	7.1	69.0	10.4	68.7	9.8
		250.0	247.1	-1.2	247.3	-1.1	246.7	-1.3
		500.0	473.6	-5.3	476.1	-4.8	474.5	-5.1
	Intestine	62.5	67.5	8.0	69.5	11.3	68.8	10.1

6-shogaol	Brain	250.0	245.4	-1.9	250.0	0.0	249.6	-0.2
		500.0	483.6	-3.3	477.5	-4.5	475.4	-4.9
		62.5	67.4	7.8	69.4	11.1	69.4	11.1
	Plasma	250.0	244.5	-2.2	247.9	-0.8	248.6	-0.6
		500.0	490.4	-1.9	488.0	-2.4	492.0	-1.6
		62.5	62.9	0.7	64.0	2.4	64.2	2.7
	Heart	250.0	244.5	-2.2	250.1	0.0	250.6	0.2
		500.0	485.4	-2.9	485.7	-2.9	484.0	-3.2
		62.5	62.7	0.3	63.8	2.1	63.5	1.6
	Liver	250.0	245.4	-1.8	249.8	-0.1	249.8	-0.1
		500.0	480.6	-3.9	476.1	-4.8	478.3	-4.3
		62.5	63.2	1.1	64.7	3.5	64.3	2.9
	Spleen	250.0	247.8	-0.9	253.4	1.4	254.5	1.8
		500.0	488.2	-2.4	485.3	-2.9	488.5	-2.3
		62.5	63.2	1.1	64.8	3.7	65.4	4.6
	Lung	250.0	248.2	-0.7	254.0	1.6	256.0	2.4
		500.0	491.3	-1.8	491.9	-1.6	498.7	-0.3
		62.5	64.9	3.8	64.3	2.8	64.1	2.6
	Kidney	250.0	249.6	-0.2	250.3	0.1	249.9	-0.0
		500.0	483.1	-3.4	483.3	-3.3	483.8	-3.2
		62.5	63.6	1.8	64.1	2.6	64.5	3.2
	Stomach	250.0	245.8	-1.7	252.1	0.8	252.9	1.2
		500.0	487.3	-2.5	485.6	-2.9	481.7	-3.7
		62.5	63.3	1.3	63.9	2.2	64.0	2.4
		250.0	249.5	-0.2	249.8	-0.1	250.0	0.0
		500.0	483.2	-3.4	487.4	-2.5	485.1	-3.0

8-gingerol	Intestine	62.5	63.7	1.9	64.9	3.8	65.5	4.7
		250.0	249.9	-0.0	255.7	2.3	257.7	3.1
		500.0	491.7	-1.7	490.9	-1.8	499.8	-0.0
	Brain	62.5	63.2	1.1	63.8	2.1	64.5	3.2
		250.0	248.6	-0.6	252.0	0.8	252.9	1.2
		500.0	485.7	-2.9	484.3	-3.1	482.1	-3.6
	Plasma	62.5	60.9	-2.5	61.9	-1.0	62.1	-0.7
		250.0	254.2	1.7	257.0	2.8	256.7	2.7
		500.0	485.6	-2.9	483.6	-3.3	482.9	-3.4
	Heart	62.5	60.4	-3.3	62.4	-0.2	61.9	-0.9
		250.0	256.8	2.7	261.3	4.5	260.9	4.4
		500.0	478.1	-4.4	484.7	-3.1	476.3	-4.7
	Liver	62.5	61.9	-1.0	63.6	1.7	63.6	1.7
		250.0	258.6	3.4	261.6	4.6	260.1	4.0
		500.0	497.0	-0.6	500.1	0.0	495.1	-1.0
	Spleen	62.5	61.9	-1.0	64.0	2.4	63.8	2.1
		250.0	257.9	3.2	261.5	4.6	262.3	4.9
		500.0	487.4	-2.5	489.8	-2.1	488.1	-2.4
	Lung	62.5	60.7	-2.9	62.2	-0.5	61.9	-1.0
		250.0	255.6	2.3	258.6	3.4	258.3	3.3
		500.0	484.9	-3.0	492.3	-1.5	486.6	-2.7
	Kidney	62.5	60.5	-3.3	61.9	-1.0	62.5	-0.0
		250.0	254.1	1.6	256.7	2.7	258.3	3.3
		500.0	490.3	-1.9	489.8	-2.0	496.4	-0.7
Stomach	62.5	61.8	-1.1	62.5	0.1	62.3	-0.4	
	250.0	257.6	3.0	258.0	3.2	257.7	3.1	



8-shogaol	Intestine	500.0	482.8	-3.4	486.9	-2.6	486.2	-2.8
		62.5	62.1	-0.7	63.7	1.9	63.5	1.6
		250.0	255.9	2.3	260.0	4.0	259.1	3.6
	Brain	500.0	491.9	-1.6	486.9	-2.6	487.0	-2.6
		62.5	60.6	-3.0	62.5	0.1	62.6	0.1
		250.0	254.7	1.9	258.0	3.2	258.1	3.3
	Plasma	500.0	489.3	-2.2	486.4	-2.7	493.3	-1.3
		15.6	15.7	0.2	15.4	-1.3	15.6	0.0
		125.0	118.0	-5.6	120.6	-3.5	120.5	-3.6
	Heart	250.0	257.5	3.0	257.6	3.1	257.6	3.0
		15.6	15.4	-1.7	15.7	0.2	15.4	-1.7
		125.0	120.9	-3.3	122.3	-2.2	121.6	-2.7
	Liver	250.0	255.6	2.2	258.2	3.3	257.7	3.1
		15.6	15.7	0.5	15.8	1.1	16.3	4.4
		125.0	125.7	0.6	125.1	0.0	122.9	-1.7
	Spleen	250.0	254.7	1.9	258.2	3.3	257.7	3.1
		15.6	15.2	-2.7	15.0	-4.1	14.6	-6.7
		125.0	123.4	-1.3	127.5	2.0	127.7	2.2
	Lung	250.0	260.1	4.0	260.8	4.3	264.8	5.9
		15.6	15.8	0.8	15.8	0.9	15.8	1.1
		125.0	121.5	-2.8	121.8	-2.6	121.7	-2.7
	Kidney	250.0	257.8	3.1	256.8	2.7	257.3	2.9
		15.6	16.1	3.1	15.9	1.7	15.9	1.6
		125.0	121.2	-3.1	121.4	-2.9	122.2	-2.3
Stomach	250.0	258.4	3.4	258.4	3.4	259.1	3.6	
	15.6	15.3	-2.1	15.6	-0.4	15.4	-1.2	

10-gingerol	Intestine	125.0	124.0	-0.8	123.3	-1.4	123.9	-0.9
		250.0	256.6	2.6	256.5	2.6	256.8	2.7
		15.6	15.2	-2.8	14.8	-5.5	14.4	-8.1
	Brain	125.0	123.4	-1.3	125.9	0.7	127.7	2.2
		250.0	260.7	4.3	260.6	4.2	264.7	5.9
		15.6	16.1	3.3	15.7	0.5	15.6	-0.3
	Plasma	125.0	118.4	-5.3	121.4	-2.9	122.2	-2.3
		250.0	258.8	3.5	258.2	3.3	258.3	3.3
		62.5	65.0	4.0	66.5	6.4	66.8	6.8
	Heart	250.0	248.4	-0.6	255.1	2.0	256.9	2.8
		500.0	496.9	-0.6	502.8	0.6	498.0	-0.4
		62.5	63.7	1.9	64.4	3.0	65.9	5.5
	Liver	250.0	252.2	0.9	256.5	2.6	255.1	2.0
		500.0	500.5	0.1	500.6	0.1	494.0	-1.2
		62.5	65.2	4.4	65.6	5.0	66.0	5.5
	Spleen	250.0	249.8	-0.1	251.7	0.7	249.3	-0.3
		500.0	509.0	1.8	509.3	1.9	508.1	1.6
		62.5	63.3	1.3	65.5	4.8	65.1	4.2
	Lung	250.0	252.3	0.9	260.7	4.3	264.4	5.8
		500.0	507.4	1.5	515.1	3.0	513.1	2.6
		62.5	64.2	2.7	65.9	5.4	65.4	4.7
	Kidney	250.0	254.1	1.7	258.8	3.5	258.2	3.3
		500.0	487.7	-2.5	483.4	-3.3	480.1	-4.0
		62.5	65.6	5.0	66.9	7.0	66.4	6.3
		250.0	250.2	0.1	255.7	2.3	258.1	3.2
		500.0	506.1	1.2	512.0	2.4	512.2	2.4

10-shogaol	Stomach	62.5	66.5	6.4	66.9	7.0	66.8	6.9
		250.0	255.1	2.0	256.5	2.6	258.7	3.5
		500.0	508.0	1.6	510.2	2.0	505.5	1.1
	Intestine	62.5	65.4	4.7	67.1	7.3	66.7	6.7
		250.0	254.3	1.7	260.4	4.2	264.4	5.8
		500.0	509.2	1.8	515.1	3.0	513.1	2.6
	Brain	62.5	64.3	2.9	66.6	6.5	66.2	6.0
		250.0	250.0	0.0	256.3	2.5	259.0	3.6
		500.0	503.8	0.8	511.5	2.3	512.1	2.4
	Plasma	15.6	14.7	-6.0	15.0	-4.1	14.6	-6.5
		125.0	116.8	-6.6	120.1	-3.9	120.9	-3.3
		250.0	242.8	-2.9	246.3	-1.5	248.3	-0.7
	Heart	15.6	15.2	-3.1	15.9	2.0	15.9	2.0
		125.0	119.4	-4.5	123.5	-1.2	125.5	0.4
		250.0	247.5	-1.0	252.6	1.0	253.2	1.3
	Liver	15.6	15.4	-1.7	16.0	2.1	16.2	3.4
		125.0	119.8	-4.2	122.9	-1.7	123.0	-1.6
		250.0	245.0	-2.0	248.7	-0.5	247.3	-1.1
	Spleen	15.6	14.9	-4.4	15.1	-3.3	15.0	-4.0
		125.0	119.2	-4.7	123.3	-1.4	122.8	-1.7
		250.0	247.2	-1.1	248.9	-0.5	251.2	0.5
	Lung	15.6	14.6	-6.5	14.9	-4.5	15.0	-4.3
		125.0	116.9	-6.5	119.8	-4.2	120.2	-3.9
		250.0	244.5	-2.2	246.7	-1.3	247.3	-1.1
Kidney	15.6	15.1	-3.5	14.9	-4.9	14.8	-5.5	
	125.0	119.5	-4.4	121.3	-2.9	121.3	-3.0	

Zingerone	Stomach	250.0	244.8	-2.1	248.5	-0.6	250.2	0.1
		15.6	14.9	-4.4	14.7	-5.9	14.3	-8.3
		125.0	122.4	-2.1	121.2	-3.1	121.4	-2.9
	Intestine	250.0	248.2	-0.7	247.1	-1.2	249.4	-0.2
		15.6	15.6	-0.5	15.2	-2.9	14.6	-6.3
		125.0	120.0	-4.0	123.1	-1.5	122.6	-1.9
	Brain	250.0	249.8	-0.1	250.8	0.3	253.6	1.5
		15.6	15.3	-2.2	15.3	-2.1	14.8	-5.1
		125.0	118.5	-5.2	121.6	-2.7	121.5	-2.8
	Plasma	250.0	244.7	-2.1	247.9	-0.9	250.0	0.0
		62.5	63.8	2.1	63.7	1.9	63.5	1.6
		250.0	243.1	-2.8	244.1	-2.4	244.3	-2.3
	Heart	500.0	482.5	-3.5	479.3	-4.1	478.8	-4.3
		62.5	63.5	1.5	64.4	3.0	64.2	2.7
		250.0	243.3	-2.7	245.0	-2.0	242.6	-3.0
	Liver	500.0	486.9	-2.6	484.6	-3.1	484.4	-3.1
		62.5	64.0	2.4	64.4	3.0	64.2	2.7
		250.0	243.8	-2.5	245.0	-2.0	245.9	-1.6
	Spleen	500.0	482.4	-3.5	482.3	-3.5	484.5	-3.1
		62.5	63.8	2.1	62.9	0.6	62.0	-0.8
		250.0	247.4	-1.1	247.7	-0.9	248.4	-0.7
	Lung	500.0	492.4	-1.5	488.5	-2.3	495.6	-0.9
		62.5	63.1	1.0	63.6	1.8	63.4	1.4
		250.0	246.4	-1.5	245.4	-1.8	244.2	-2.3
	Kidney	500.0	482.1	-3.6	476.6	-4.7	478.1	-4.4
		62.5	64.2	2.7	64.5	3.2	64.5	3.2

		250.0	244.9	-2.0	246.2	-1.5	247.1	-1.1
		500.0	484.6	-3.1	479.7	-4.1	476.4	-4.7
	Stomach	62.5	63.1	1.0	63.5	1.6	63.1	0.9
		250.0	243.0	-2.8	243.9	-2.5	243.2	-2.7
		500.0	484.7	-3.1	483.4	-3.3	480.0	-4.0
	Intestine	62.5	62.6	0.1	62.6	0.1	61.7	-1.3
		250.0	245.5	-1.8	247.0	-1.2	247.7	-0.9
		500.0	497.8	-0.4	489.5	-2.1	496.6	-0.7
	Brain	62.5	64.7	3.6	63.9	2.2	63.9	2.2
		250.0	243.7	-2.5	245.6	-1.8	247.1	-1.1
		500.0	486.6	-2.7	479.0	-4.2	474.0	-5.2
6-isodehydrogingenone	Plasma	15.6	14.1	0.7	14.7	-5.9	14.9	-4.9
		125.0	120.2	-2.2	120.8	-3.3	120.1	-4.0
		250.0	243.8	-2.9	246.6	-1.4	245.9	-1.6
	Heart	15.6	14.8	0.3	15.2	-2.7	15.0	-3.8
		125.0	122.8	-1.8	124.8	-0.1	122.6	-1.9
		250.0	244.7	-3.9	248.5	-0.6	247.6	-1.0
	Liver	15.6	14.6	1.1	15.1	-3.7	14.9	-4.8
		125.0	126.4	-0.9	127.0	1.6	125.0	0.0
		250.0	246.1	-2.4	248.7	-0.5	249.8	-0.1
	Spleen	15.6	14.5	1.1	15.5	-0.8	15.5	-1.2
		125.0	121.5	-0.7	120.8	-3.3	121.1	-3.1
		250.0	246.8	-1.8	249.0	-0.4	248.5	-0.6
	Lung	15.6	14.5	3.8	14.9	-4.8	14.7	-6.0
		125.0	120.3	-0.2	121.2	-3.1	120.7	-3.4
		250.0	243.2	-3.4	245.8	-1.7	244.9	-2.0

Kidney	15.6	14.4	1.8	14.8	-5.3	15.0	-4.2
	125.0	125.2	-1.7	124.2	-0.6	125.5	0.4
	250.0	245.0	-2.5	248.4	-0.7	248.6	-0.6
Stomach	15.6	14.6	1.3	15.0	-3.7	15.0	-3.8
	125.0	120.6	-0.2	120.0	-4.0	118.8	-5.0
	250.0	246.8	-3.4	247.8	-0.9	247.2	-1.1
Intestine	15.6	14.9	1.9	15.4	-1.7	15.3	-2.0
	125.0	123.9	-0.0	122.8	-1.7	123.1	-1.5
	250.0	247.4	-1.7	248.9	-0.4	248.8	-0.5
Brain	15.6	14.7	1.1	15.1	-3.2	15.3	-2.1
	125.0	124.8	-0.6	125.1	0.1	127.1	1.7
	250.0	243.8	-2.9	247.0	-1.2	247.2	-1.1

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