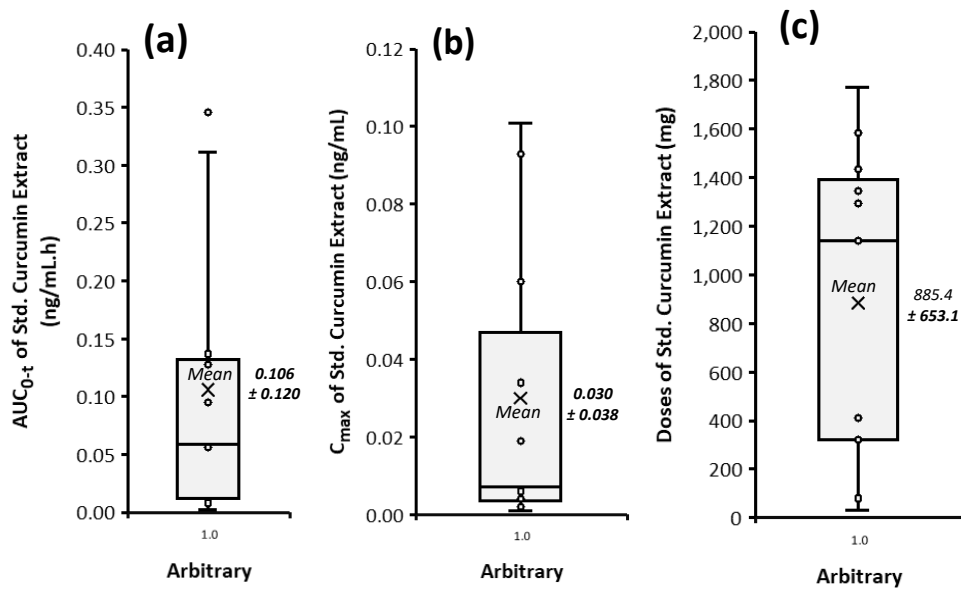
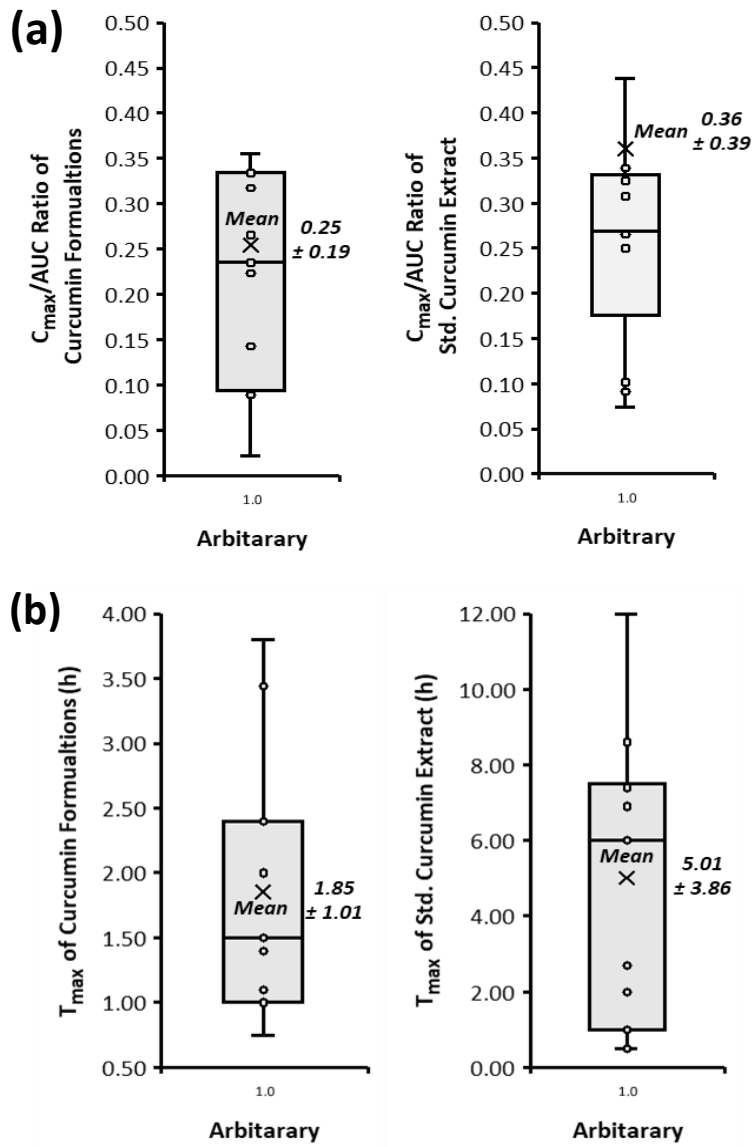


**Pharmacokinetic studies of commercially available curcumin formulations in healthy humans: A systematic comparison with novel highly bioavailable curcuRouge® formulation**



**Figure S1.** Box plots depict the data distribution and the mean  $\pm$  s.d for standard curcumin extracts. These extracts served as references in human pharmacokinetic studies of commercially available absorption-enhanced curcumin formulations included in comparative analysis. (a) AUC<sub>0-t</sub> normalized per milligram of curcumin; (b) C<sub>max</sub> normalized per milligram of curcumin; (c) curcumin dose in standard curcumin extracts administered.



**Figure S2.** Box plots showing the data distribution and mean  $\pm$  standard deviation of commercially available absorption-enhanced curcumin formulations and standard curcumin extracts serve as reference for the human pharmacokinetics studies included in the comparative analysis (a)  $C_{max}/AUC_{0-t}$  ratio normalized per milligram of curcumin, and (b)  $T_{max}$ .

**Table S1.** Doses information from the human clinical bioavailability studies on commercially available curcumin formulations.

Curcumin Formulation	References	Formulations Intake Description				Control (Std. curcumin extract) Intake Description			
		Material dose (mg)	Total Curcuminoid dose (mg)	Curcumin content /capsule	Curcumin dose in study (mg)	Material dose (mg)	Total Curcuminoid dose (mg)	Curcumin content /capsule	Curcumin dose in study (mg)
<b>Biocurcumax™ BCM-95® (Arjuna Natural Extracts Ltd., India)</b>	Antony et al. (2008)	2000.0	1720.0	325.0	1300.0 (4 capsules)	2000.0	1900.0	359.0	1436.0 (4 capsules)
	Sunagawa et al. (2015)	2000.0	1720.0	260.0	279.3 (1 capsule) (measured)	NE	NE	NE	NE
	Jager et al. (2014)	n. a	376.0	33.0	297.0 (6 capsules)	1895.0	1800.0	336.7	1346.8 (4 capsules)
	Purpura et al. (2018)	2000.0	392.4 (measured)	59.2 (measured)	355.2 (6 capsules) (measured)	2000.0	1945.2 (measured)	295.7 (measured)	1774.2 (6 capsules) (measured)
<b>Meriva® (Indena SpA, Italy)</b>	Cuomo et al. (2011)	2000.0	376.0	33.0	297.0	1893.0	1799.0	259.0	1295.0 (5 capsules)
	Cuomo et al. (2011)	1110.0	209.0	33.0	165.0	1893.0	1799.0	259.0	1295.0 (5 capsules)
	Sunagawa et al. (2015)	n. a	n. a	75.0	152.5 (2 capsules) (measured)	NE	NE	NE	NE
	Fanca-Berthon et al. (2021)	n. a	179.0 (measured)	73.0 (measured)	146.0 (2 capsules) (measured)	1500.0	1380.0 (measured)	285.0	1140 (4 capsules) (measured)
	Jager et al. (2014)	n. a	376.0	33.0	297.0 (6 capsules)	1895.0	1800.0	336.7	1346.8 (4 capsules)
	Purpura et al. (2018)	2000.0	382.2 (measured)	59.0 (measured)	354.0 (6 capsules) (measured)	2000.0	1945.2	295.7	1774.2 (6 capsules)
<b>Theracurmin™ (Theravalues Corp., Japan)</b>	Sunagawa et al. (2015)	n. a	1500.0	30.0	182.4 (6 capsules)	NE	NE	NE	NE
	Sasaki et al. (2011)	n. a	n. a	n. a	30.0	n. a	n. a	n. a	30.0
	Sunagawa et al. (2021)	n. a	n. a	30.0	90.0 (3 capsules)	NE	NE	NE	NE
<b>Longvida® (Verdure Science, USA)</b>	Gota et al. (2010)	650.0	n. a	n. a	163.0	NE	NE	NE	NE
<b>CurcuWin® (OmniActice Health Technology, India)</b>	Jager et al. (2014)	n. a	376.0	33.0	297.0 (6 capsules)	1895.0	1800.0	336.7	1346.8 (4 capsules)
<b>BioCruc®/CLDM (Boston BioPharm, USA)</b>	Stohs et al. (2018)	n. a	456.0	64.6	387.6 (6 capsules)	400.0	380.0	53.8	323 (6 capsules)
<b>NovaSol® (Frutarom, Isreal)</b>	Schiborr et al. (2014)	n. a	500	n. a	410	526	500	n. a	410.0

Curcumin Formulation	References	Formulations Intake Description				Control (Std. curcumin extract) Intake Description			
		Material dose (mg)	Total Curcuminoid dose (mg)	Curcumin content /capsule	Curcumin dose in study (mg)	Material dose (mg)	Total Curcuminoid dose (mg)	Curcumin content /capsule	Curcumin dose in study (mg)
	Fanca-Berthon et al. (2021)	1000.0	62.7 (measured)	25.1 (measured)	50.2 (2 capsules) (measured)	1500.0	1380.0 (measured)	285.0 (measured)	1140.0 (4 capsules) (measured)
<b>CavaCurmin® (Wacker Chemie AG, Germany)</b>	Purpura et al. (2018)	2000.0	371.4	58.0	348.0 (6 capsules)	2000.0	1945.2	295.7	1774.2 (6 capsules)
<b>CurQfen™ (Spiceuticals, Akay Group, India)</b>	Kumar et al. (2016)	1000.0	391.0	153.5	307.0	411.0	391.0	160.6	321.1
	Kumar et al. (2016)	250.0	97.7	76.7	76.7	102.7	97.7	80.5	80.5
<b>Curcumin C<sub>3</sub> Complex® + Piperine (Sabinsa, USA)</b>	Shoba et al. (1998)	2000.0 +20.0	1904.0 +20.0	395.7 +5.0	1582.8 +20.0	2000.0	1904.0	395.7	1582.8
<b>curcuRouge® (Therabiopharma Inc., Japan)</b>	Sunagawa et al. (2021)	241.3	n. a	30.0	90.0 (3 capsules)	NE	NE	NE	NE

*n.a = not available; NE = not estimated;*