Title: Longitudinal Changes in Human Milk Minerals and Vitamins in Chinese Population: A Scoping Review

Supplementary Materials

Supplementary Table S1. Quality assessment of the included studies.

References	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
[1]	Y	NR	Y	Y	Y	Y	NR	Y	Y	Y	Y	Y	NR	Y	Y	NR	CD
[2]	Y	NR	Y	Y	Y	CD	NR	Y	Y	Y	Y	Y	CD	NR	Y	NR	NR
[3]	Y	NR	Y	Y	Y	CD	NR	Y	Y	Y	Y	Y	NR	NR	Y	Y	NR
[4]	NR	NR	Y	Y	Y	Y	NR	Y	NR	NR	NR	Y	Y	NR	Y	NR	Y
[5]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	Y	Y	NR	NR
[6]	Y	NR	Y	Y	Y	CD	NR	Y	Y	Y	Y	Y	NR	NR	NR	NR	NR
[7]	NR	NR	Y	Y	Y	CD	NR	Y	NR	Y	NR	Y	Y	NR	Y	NR	NR
[8]	Y	Y	Y	Y	Y	Y	CD	Y	NR	NR	NR	Y	Y	NR	Y	NR	NR
[9]	NR	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[10]	Y	Y	Y	Y	Y	Y	NR	Y	NR	NR	NR	Y	NR	Y	Y	NR	NR
[11]	NR	NR	Y	Y	Y	Y	NR	Y	NR	NR	Y	Y	CD	Y	NR	NR	NR
[12]	Y	NR	Y	Y	Y	Y	NR	Y	Y	Y	Y	Y	Y	NR	Y	NR	NR
[13]	Y	Y	Y	Y	Y	Y	NR	Y	NR	NR	CD	Y	NR	NR	NR	NR	NR
[14]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	Y	NR	NR	NR	NR
[15]	NR	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[16]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[17]	NR	NR	Y	Y	Y	CD	NR	Y	NR	Y	NR	Y	Y	NR	Y	NR	NR

[18]	Y	NR	Y	Y	Y	Y	NR	Y	NR	Y	NR	Y	Y	NR	Y	Y	NR
[19]	NR	NR	Y	Y	Y	Y	NR	Y	Y	Y	Y	Y	Y	NR	NR	Y	NR
[20]	NR	NR	Y	Y	Y	CD	NR	Y	Y	Y	Y	Y	NR	NR	Y	Y	Y
[21]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	Y	NR	Y	NR	NR
[22]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	Y	Y	NR	NR	Y	NR	NR
[23]	Y	NR	Y	Y	Y	CD	NR	Y	Y	Y	Y	Y	Y	NR	Y	NR	NR
[24]	Y	Y	Y	Y	Y	CD	NR	Y	Y	Y	Y	Y	NR	NR	Y	Y	Y
[25]	NR	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[26]	NR	NR	Y	Y	Y	CD	NR	Y	Y	NR	NR	Y	NR	NR	Y	NR	NR
[27]	Y	NR	Y	Y	Y	Y	NR	Y	Y	Y	Y	Y	NR	NR	Y	Y	NR
[28]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	Y	Y	NR
[29]	NR	NR	Y	Y	Y	CD	NR	Y	NR	Y	NR	Y	NR	NR	Y	NR	NR
[30]	NR	Y	Y	Y	Y	Y	NR	Y	NR	NR	NR	Y	NR	NR	Y	NR	NR
[31]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	Y	NR	NR	Y
[32]	NR	NR	Y	Y	Y	CD	CD	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[33]	Y	Y	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	CD	NR	Y	NR	NR
[34]	Y	NR	Y	Y	Y	CD	NR	Y	NR	Y	NR	Y	NR	NR	Y	NR	NR
[35]	Y	Y	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	Y94%	NR	Y	NR	NR
[36]	NR	NR	Y	Y	Y	CD	NR	Y	Y	Y	Y	Y	NR	NR	Y	NR	NR
[37]	NR	NR	Y	NR	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[38]	NR	Y	Y	Y	Y	CD	NR	Y	NR	NR	Y	Y	CD	NR	Y	NR	NR
[39]	NR	NR	Y	Y	Y	CD	NR	Y	NR	Y	NR	Y	NR	NR	Y	NR	NR
[40]	NR	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[41]	Y	Y	Y	Y	Y	CD	NR	Y	NR	Y	NR	Y	NR	NR	Y	NR	NR

[42]	NR	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	Y	NR	Y
[43]	NR	Y	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	Y	NR	Y	NR	NR
[44]	Y	Y	Y	NR	CD	CD	NR	Y	NR	NR	NR	Y	NR	NR	Y	NR	NR
[45]	Y	Y	Y	Y	Y	CD	NR	Y	NR	Y	CD	Y	NR	NR	Y	NR	NR
[46]	NR	NR	Y	NR	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[47]	NR	NR	Y	NR	Y	CD	NR	Y	NR	NR	Y	Y	NR	NR	Y	NR	NR
[48]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	Y	NR	NR
[49]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	Y	Y	Y	NR	NR
[50]	Y	NR	Y	Y	Y	CD	NR	Y	NR	Y	NR	Y	Y	NR	Y	NR	NR
[51]	NR	NR	Y	NR	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	Y	NR	NR
[52]	NR	NR	Y	Y	Y	CD	CD	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[53]	NR	NR	Y	NR	Y	CD	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[54]	NR	Y	Y	Y	Y	CD	Y	Y	NR	NR	NR	Y	CD	NR	Y	NR	NR
[55]	Y	Y	Y	Y	Y	CD	NR	Y	NR	Y	Y	Y	NR	NR	Y	NR	NR
[56]	Y	NR	Y	Y	Y	CD	NR	Y	NR	NR	NR	Y	CD	Y	Y	NR	NR
[57]	Y	NR	Y	Y	Y	Y	NR	Y	NR	Y	NR	Y	Y	Y	Y	NR	NR
[58]	Y	NR	Y	NR	Y	CD	CD	Y	NR	NR	Y	Y	NR	NR	NR	Y	NR
[59]	NR	NR	Y	Y	Y	CD	Y	Y	NR	NR	NR	Y	NR	NR	NR	Y	NR
[60]	NR	NR	Y	Y	Y	CD	Y	Y	NR	NR	NR	Y	Y	NR	NR	Y	NR
[61]	Y	NR	Y	Y	Y	NR	Y	Y	Y	Y	NR	Y	NR	Y	Y	Y	Y
[62]	Y	NR	Y	CD	Y	NR	Y	Y	Y	Y	NR	Y	NR	Y	Y	Y	NR
[63]	Y	NR	Y	Y	Y	NR	Y	Y	Y	Y	NR	Y	NR	Y	Y	Y	Y
[64]	Y	NR	Y	Y	Y	NR	Y	Y	Y	Y	NR	Y	NR	Y	Y	Y	NR
[65]	Y	NR	Y	Y	Y	NR	Y	Y	Y	Y	NR	Y	NR	Y	Y	Y	NR

[66]	Y	NR	Y	Y	Y	NR	NR	Y	Y	Y	NR	Y	NR	Y	Y	NR	NR
[67]	NR	NR	Y	Y	Y	NR	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[68]	Y	NR	Y	Y	Y	NR	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[69]	Y	NR	Y	Y	Y	NR	NR	Y	NR	NR	NR	Y	NR	NR	Y	NR	Y
[70]	Y	NR	Y	Y	Y	NR	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[71]	NR	NR	Y	Y	Y	NR	N	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[72]	Y	NR	Y	Y	Y	NR	NR	Y	Y	Y	NR	Y	NR	Y	Y	Y	NR
[73]	NR	NR	Y	Y	Y	NR	N	Y	Y	Y	NR	Y	NR	NR	Y	Y	NR
[74]	Y	NR	Y	Y	Y	NR	Y	Y	Y	Y	NR	Y	NR	NR	Y	Y	NR
[75]	Y	NR	Y	CD	NR	NR	NR	Y	NR	NR	NR	Y	NR	Y	Y	Y	NR
[76]	Y	NR	Y	Y	Y	NR	NR	Y	NR	NR	NR	Y	NR	NR	NR	NR	NR
[77]	Y	NR	Y	Y	Y	NR	NR	Y	Y	NR	NR	Y	NR	Y	Y	NR	NR
[78]	Y	NR	Y	Y	Y	NR	Y	Y	NR	NR	NR	Y	NR	Y	Y	NR	NR

Note:

Q1: Did the authors clearly describe that the infants were Y or pre-term?

Q2: Did the authors describe whether births were via vaginal delivery or C-section?

Q3: Did the authors clearly describe that the mothers were healthy?

Q4: Did the authors clearly describe the number of mothers recruited in the study?

Q5: Did the authors clearly describe the geographic locations of human milk sample collection?

Q6:Did the authors clearly describe whether the human samples were collected from Urban or rural areas?

Q7: Did the authors study the dietary intakes and supplement of lactating mothers**?**

Q8: Did the authors clearly describe the lactation stage without using the terms colostrum, transition milk, or mature milk?

Q9: Did the authors clearly describe the Fore-milk, hind-milk, full expression, or pooled full expression within 3-4 hours?

Q10: Did the authors clearly describe the time of day when the human milk was collected or whether all the human milk was collected at the same time of the day?

Q11: Did the authors describe whether the human milk was collected via manual operation or breast pump?
Q12: Did the authors provide detailed methods for measuring the minerals and vitamins concentration?
Q13: Did the authors clearly describe the primipara or not?
Q14: Did the authors clearly describe the single or multiple births?
Q15: Did the authors clearly describe the maternal age?
Q16: Did the authors clearly describe the mother smokes or not?
Q17: Did the authors clearly describe the maternal ethnicity?
CD, cannot be determined; NR, not reported; N, no; Y, yes.

Supplementary Table S2. List of all included studies for minerals and trace elements

References	City	Reported outcomes	Quantification Methods	Lactation (d)	Numbers of mothers	Numbers of samples	Full-term or pre-term	Fore-milk or hind-milk or full expression	Collection time	Manual or pump	Ethnic	Dietary supplements intake	Urban or rural	Maternal age (years of age)	Delivery	Primiparae or multiparae	Monocyesis or multiple gestation	Smoking or not
[1]	Beijing Guangzhou, Guangdong Suzhou, Jiangsu	Fe, Zn, Cu, Ca, P, K, Na, Mg, Se, I	ICP-MS	5-11 12-30 31-60 61-120 121-240	444	444 444 444 444 444	Full-term	Full expression	9-11 a.m	Pump	Han (95.6%)	N.S.	Urban	18-45	N.S.	N.S.	Monocyesis	N.S.
[2]	Inner Mongolia	Ca, Mg, Cu, Fe, Mn, Na, K, Zn; P; Cl; I; Se	AAS; Spectrophotometer; Potentiometric Titration; HPLC; AFS	3-7 8-21 22-180	66	7 7 66	Full-term	Full expression	9-11 a.m	Pump	N.S.	N.S.	N.S.	28.3±3.9	N.S.	Primiparae (83.3%)	N.S.	N.S.
[3]	Qiqihar, Heilongjiang	Fe, Zn, Cu, Ca, P, K, Na, Mg, Mn	AAS	1-7 8-14 15-180	142	26 19 21	Full-term	Full expression	9-11 a.m	Pump	N.S.	N.S.	N.S.	18-40	N.S.	N.S.	N.S.	Not
[4]	Guiyang, Guizhou	Fe, Zn, Cu	AAS	5-7 42-56 90 180	120	N.S.	N.S.	N.S.	N.S.	N.S.	Han, Miao, Buyei	N.S.	Rural	22-32	N.S.	Primipara	N.S.	N.S.
[5]	Xiamen, Fujian	Zn, Cu, Mn	ICP-MS	3-5	200	200	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	19-38	N.S.	N.S.	Monocyesis	N.S.
[6]	Beijing	Fe, Zn, Ca	AAS	42 90	100	50 50	Full-term	Fore-milk	9-11 a.m	Manual	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[7]	Chaoyang, Liaoning	Fe, Zn, Cu	AAS	<12 13-30 31-60	1012		N.S.	N.S.	9-11 a.m	N.S.	N.S.	N.S.	N.S.	20-35	N.S.	Primipara	N.S.	N.S.

	Harbin, Heilongjiang Liaocheng, Shandong Wuzhong, Ningxia Taicang, Jiangsu Wuhan, Hubei Nanning, Guangxi			61-90 91-120 121-150 151-180													
[8]	Nanjing, Jiangsu	Fe, Zn, Cu, Ca, Mg	ICP	3-6 40-50	80	80 40	Full-term	N.S.	N.S.	N.S.	N.S.	Yes	Urban	26.53	Vaginal (75%)	Primipara	N.S.	N.S.
[9]	Hohhot, Inner Mongolia	Fe, Zn, Ca, K, Na, Mg; Se	AAS; AFS	3-7 8-21 22-180	113	12 18 23	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[10]	Baoding, Hebei	Zn, Cu, Mn	ICP-MS	3-5	206	206	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	Urban	20-35	Vaginal (62%)	N.S.	Monocyesis	N.S.
[11]	Shenzhen, Guangdong	Fe, Zn, Ca, K, Na, Mg	ICP-OES	30-60	235	235	N.S.	N.S.	N.S.	Manual	N.S.	N.S.	Urban (70.6%)	N.S.	N.S.	87%Primipara	Monocyesis	N.S.
[12]	Shanghai	Fe, Zn, Cu, Mn; Na, K, Ca; P; Cl	AAS; FES; Plasma spectrometry ;Ion chromatography	8-10	120	120	Full-term	Fore-milk	9-11 a.m	Manual	N.S.	N.S.	Urban (75%)	22-36	N.S.	Primipara	N.S.	N.S.
[13]	Weihui, Henan	Fe, Zn, Cu; Se	AAS; AFS	7 21 90 210 300	27	27	Full-term	N.S.	N.S.	Manual, pump	N.S.	N.S.	Urban (51.8%)	N.S.	Vaginal	N.S.	N.S.	N.S.
[14]	Beijing	Fe, Zn, Ca;	AAS; AFS	1	80	80 54	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	Primipara	N.S.	N.S.

[15]	Zhejiang	Se Fe, Zn, Cu, Ca, P, K., Na, Mg, Mn, Ba	ICP-AES	45 75 90 120 135 150 165 195 270 285	12	1 1 2 1 1 2 1 1 1 1	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[16]	Shanghai	Fe, Zn, Cu, Ca, Mg	AAS	3 42	58	58	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[17]	Guangdong	Fe, Zn, Cu, Ca	AAS	1 2 3 4 5 6 7	12	4 6 12 12 12 9 8	N.S.	N.S.	9-10 a.m	N.S.	N.S.	N.S.	N.S.	21-30	N.S.	Primipara	N.S.	N.S.
[18]	Beijing	Fe, Zn, Cu, Ca, Mg; P	AAS; Ammonium molybdate colorimetry	0-30 31-60 61-90 91-120 121-150 151-180 181-	132	9 20 24 24 22 23 10	Full-term	N.S.	10-12 a.m	N.S.	N.S.	N.S.	Urban (42.3 %)	21-38	N.S.	Primipara	N.S.	Not
[19]	Nanning, Guangxi	Mn, Fe, Cu, Zn; Ca	AAS; FES	0-30 31-60 61-90 91-120 121-150 151-180	120	18 21 19 20 21 21	N.S.	Fore-milk	9-11 a.m	Manual	N.S.	N.S.	Urban	N.S.	N.S.	Primipara	N.S.	Not
[20]	Guangxi	Fe, Zn, Cu, Mn Ca	AAS; FES	0-30 31-60 61-90 91-120 121-15	240	35 42 40 41 41	N.S.	Fore-milk	9-11 a.m	Manual	Dong, Han	N.S.	N.S.	20-35	N.S.	N.S.	N.S.	Not

				0 151-180		42											
[21]	Lanzhou, Gansu	Ca, Fe, Zn	AAS	31-60 61-90 91-120 121-150 151-180	70	24 10 11 13 12	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	20-30	N.S.	Primipara	N.S.	N.S.
[22]	Tangshan, Hebei	Se; Ca; P	AFS; AAS; Ammonium molybdate colorimetry	1-5 11	31	31 31	Full-term	N.S.	N.S.	Manual	N.S.	N.S.	N.S.	24-30	N.S.	N.S.	N.S.	N.S.
[23]	Jinan, Shandong	Fe, Zn, Cu, Ca, Mg	AAS	42	240	240	Full-term	Fore-milk	9-10 a.m	Manual	N.S.	N.S.	N.S.	22-35	N.S.	Primipara	N.S.	N.S.
[24]	Guangxi	Fe, Zn, Ca	AAS	15 30	240	50 50	Full-term	Fore-milk	10 a.m	Manual	Zhuang	N.S.	N.S.	23-35	Vaginal	N.S.	N.S.	Not
[25]	Tangshan, Hebei	Fe, Zn, Cu, Ca, P, K, Na, Mg, Mn	AAS, ICP-MS	0-15 16-30 31-60 61-120 121-180 0-180	40	8 5 7 10 10 40	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[26]	Beijing	Zn, Cu, Ca, Mg; Se; P	AAS; AFS; Ammonium molybdate colorimetry	3	65	65	N.S.	Full expression	N.S.	N.S.	N.S.	N.S.	N.S.	22-34	N.S.	N.S.	N.S.	N.S.
[27]	Nanning, Guangxi	Fe, Zn, Ca	AAS	30	50	50	Full-term	Fore-milk	9-11 a.m	Manual	N.S.	N.S.	Urban	22-35	N.S.	N.S.	N.S.	Not
[28]	Nanning, Guangxi	Zn, Cu, Mg	AAS	30	50	50	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	23-35	N.S.	N.S.	N.S.	Not
[29]	Jinan, Shandong	Fe, Zn, Cu, Ca, Mn	AAS	30-50	56	56	N.S.	N.S.	9:00 a.m to 4:00 p.m	N.S.	N.S.	N.S.	N.S.	23-35	N.S.	N.S.	N.S.	N.S.
[30]	Hebei	Fe, Zn, Cu, Ca,	ICP-MS	<30 30	150 90	168	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	Urban	20-36	Vaginal (53%)	N.S.	N.S.	N.S.

		K, Na, Mg		60 90 120	20 59 18							(76%,)					
[31]	Lanzhou, Gansu	Fe, Zn, Cu, Ca, K, Na, Mg	N.S.	30-60	1215	5820	Full-term	N.S.	N.S.	N.S.	Han	N.S.	N.S.	N.S.	N.S.	N.S.	Monocyesis	N.S.
[32]	Enshi, Hubei Beijing Liangshan, Sichuan	Se	ICP-MS	15-20	60	60	N.S.	N.S.	N.S.	N.S.	N.S.	Yes	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[33]	Laiwu, Shandong	Fe, Zn, Cu, Ca, Mg	AAS	3-5 42	200	200 200	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	24-32	Vaginal (50%)	Primipara 75%	N.S.	N.S.
[34]	Harbin, Heilongjiang Beijing Hohhot, Inner Mongolia Chengdu, Sichuan Nanchang, Jiangxi Shanghai Guangzhou, Guangdong	Fe, Zn, Cu, Ca, Mn, K, Na, Mg; P; Se	AAS; Spectrophotometry; AFS	3-6 10-13 21-25	175	175 175 175	Full-term	N.S.	9:00 a.m	N.S.	N.S.	N.S.	N.S.	20-40	N.S.	N.S.	N.S.	N.S.
[35]	Guangdong	Zn, Cu	AAS	2-4	52	52	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	22-34	Vaginal (78.8%)	Primipara 94%	N.S.	N.S.
[36]	Chaoyang, Liaoning	Fe, Zn, Cu, Ca, Mg	AAS	0-30 31-60 61-90 91-120 121-150	164	19 28 27 29 26 27	N.S.	Full expression	9-11 a.m	Pump	N.S.	N.S.	N.S.	20-34	N.S.	N.S.	N.S.	N.S.

				151-180														
[37]	Lanzhou, Gansu	Fe, Zn, Cu, Ca, Mg	ICP	3 90-180	N.S	27 29	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[38]	Tianjin	Fe, Zn, Ca, Cu	XRF	3-7	103	103	N.S.	N.S.	N.S.	Manual	N.S.	N.S.	N.S.	21-34	Vaginal (53%)	Primipara 96%	N.S.	N.S.
[39]	Lanzhou, Gansu	Fe, Zn, Cu, Ca, K, Na, Mg	AAS	3 90	352	352 352	N.S.	N.S.	8-10 a.m	N.S.	N.S.	N.S.	N.S.	20-37	N.S.	N.S.	N.S.	N.S.
[40]	Nanjing, Jiangsu	F	Electrode potential measurement	0-12 13-30 31-90 91-180 181-270	51	7 9 11 15 9	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[41]	Wuhan, Hubei	Cu, Fe, Zn, Mn, Ge	AAS	1-12 13-30 31-90	72	34 19 19	Full-term	N.S.	8-10 a.m	N.S.	N.S.	N.S.	N.S.	22-32	Vaginal	N.S.	N.S.	N.S.
[42]	Nanning, Guangxi	Fe, Zn, Cu, Ca, Mg Se, Mo, Co, Si, Ge	AAS	7 14 28 42 90 180	117	117 117 117 117 117 117	N.S.	N.S.	N.S.	N.S.	Zhuang, Han,Hui, Manchu, Yao	N.S.	N.S.	23-35	N.S.	N.S.	N.S.	N.S.
[43]	Wuhan, Hubei	Fe, Zn, Cu, Mn, Ge	AAS	1-12 13-30 60-180	176	34 19 19	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	22-23	Vaginal	Primipara	N.S.	N.S.
[44]	N.S.(Inner Mongolia?)	Fe, Zn, Cu	AAS	1-19 11-29 21-69 61-120 121-180	N.S.	52 31 37 37 36	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	22-32	Vaginal	N.S.	N.S.	N.S.
[45]	Weihui, Henan	Fe, Zn, Cu Se	AAS AFS	7 21 90	40	27 27 27	Full-term	N.S.	8-12 a.m	Manual, pump	N.S.	N.S.	N.S.	22-33	Vaginal	N.S.	N.S.	N.S.

				210 300		27 27											
[46]	Weifang, Shandong	Fe, Zn, Cu, Ca, Mg, Mn, Ge	AAS	0-7 7-14 >14	N.S	68 60 64	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[47]	Jilin	Cu, Zn, Mg	AAS	1-4 >5	N.S	39 12	N.S.	N.S.	N.S.	Manual	N.S.	N.S.	N.S.	21-38	N.S.	N.S.	N.S.
[48]	Tianjin	Fe, Zn, Cu, Ca, Mg	AAS	3-5 42	483	483 483	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	20-40	N.S.	N.S.	N.S.
[49]	Shanghai	Fe, Zn, Cu, Ca, Mg	AAS	3 42	67	63-67 31-33	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	23-35	N.S.	Primipara	Monocyesis	N.S.
[50]	Baotou, Inner Mongolia	Fe, Zn, Cu	AAS	1-10 11-20 21-60 61-120 121-180	193	52 31 37 37 36	Full-term	N.S.	8-11 a.m	N.S.	N.S.	N.S.	N.S.	22-32	N.S.	Primipara	N.S.	N.S.
[51]	Tianjin	I	ICP-MS	7 28 84 168	N.S	301 142 85 60	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	20-35	N.S.	N.S.	N.S.	N.S.
[52]	Enshi, Hubei Beijing Liangshan, Sichuan	Se	ICP-MS	90	264	264	N.S.	N.S.	N.S.	N.S.	N.S.	Yes	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[53]	Hangzhou, Zhejiang	Fe	Iron kit	0-7 7-9 90-100 300-365	N.S	58 58 58 49	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[54]	Hubei	Fe, Zn, Cu, Ca, Mg, Mn	AAS	5	103	30	N.S.	N.S.	N.S.	N.S.	N.S.	Yes	N.S.	20-38	Vaginal (75.7%)	Primipara (90%)	N.S	N.S.

[55]	Wuhan, Hubei	Fe, Zn, Cu	AAS	3 7 14 21 28	9	9 9 8 7 6	Full-term	N.S.	8-10 a.m	Manual	N.S.	N.S.	N.S.	25.3±2.9	Vaginal	N.S.	N.S.	N.S.
[56]	Taiwan	Fe, Zn, Cu, Ca, Mg	ICP-AES	2-5 6-10 11-30 31-90 91-180 181-365	211	79 28 40 35 13 16	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	20-30 (76.3%), >30 (23.7%)	N.S.	Primipara (39.8%)	Monocyesis	N.S.
[57]	Shanghai	Fe, Zn, Cu, Ca, Mg, P, K, Na, Cl, Mn	AAS	8-10	120	120	Full-term	N.S.	9-10 a.m	N.S.	N.S.	N.S.	Urban (75%)	22-36	N.S.	Primipara	Monocyesis	N.S.
[58]	Shanghai	Fe, Cu, Ca, Mg, P, K, Na, Mn; Se; Cl; I	ICP; GB5009.93-2010; Potentiometric Titration; HPLC	42	N.S	130	Full-term	N.S.	N.S.	Pump	N.S.	Yes	N.S.	N.S.	N.S.	N.S.	N.S.	Not
[59]	Yongjin, Gansu	I	Sandell-Kolthoff Methods	0-180 180-365	225	47 47	N.S.	N.S.	N.S.	N.S.	N.S.	Yes	N.S.	N.S.	N.S.	N.S.	N.S.	Not
[60]	Tianjin	I	ICP-MS	28 56 84 112 0-112	45	45 45 45 45 45	N.S.	N.S.	N.S.	N.S.	N.S.	Yes	N.S.	N.S.	N.S.	Primipara	N.S.	Not

Note: ICP-MS (Inductively Coupled Plasma Mass Spectrometry); AAS (Atomic Absorption Spectrometry); HPLC (High Performance Liquid Chromatography); AFS (Atomic Fluorescence Spectrometry); ICP-OES (Inductively Coupled Plasma-Optical Emission Spectrometer); ICP-AES (Inductively Coupled Plasma Atomic Emission Spectrometry); FES (Flame Atomic Emission Spectroscopy); XRF (X-ray Fluorescence Spectrometer.

Supplementary Table S3. List of all included studies for vitamins

References	City	Reported outcomes	Quantification Methods	Lactation (d)	Numbers of mothers	Numbers of samples	Full-term or pre-term	Fore-milk or hind-milk or full expression	Collection time	Manual or pump	Ethnic	Dietary supplements intake	Urban or rural	Maternal age (years of age)	Delivery	Primiparae or multiparae	Monocyesis or multiple gestation	Smoking or not
[61]	Beijing Shanghai Guangdong Shandong Zhejiang Heilongjiang Yunnan Gansu Inner Mongolia Xinjiang Guangxi	Vitamin B_1, Vitamin B_2, Vitamin B_6, Nicotinic acid, Pantothenic acid	UPLC-MS/MS	0-3 4-7 8-10 11-14 15-30 31-90 91-180 181-330	1778	211 275 194 222 224 164 223 212	Full-term	Full expression	9-11 a.m	N.S.	Han, Hui, Tibetan	Comparison of different diets	N.S.	20-35	N.S.	N.S.	Monocyesis	Not
[62]	Huangpu, Guangdong	Vitamin B1, B2, B6, Nicotinic acid , Pantothenic acid, Biotin	UPLC-MS/MS	4-7 8-10 11-15 16-30 31-60 31-100 101-300	N.S	30 28 23 27 20 24 31	Full-term	Full expression	9-11 a.m	N.S.	N.S	Comparison of different diets	N.S.	20-35	N.S.	N.S.	Monocyesis	Not
[63]	Beijing Shanghai Guangdong Shandong Zhejiang Heilongjiang Yunnan	Vitamin B1, B2, B6, Nicotinic acid , Pantothenic acid,	UPLC-MS/MS	0-7 8-14 15-180 181-330	6419	486 416 611 232	Full-term	Full expression	9-11 a.m	N.S.	Han, Hui, Tibetan	Comparison of different diets	N.S.	20-35	N.S.	N.S.	Monocyesis	Not

	Gansu Inner Mongolia Xinjiang Guangxi																
[64]	Beijing Suzhou, Jiangsu Guangzhou, Guangdong	Vitamin B1, B2, B6 Nicotinic acid , Folic acid, Biotin	HPLC-MS	5-11 12-30 31-60 61-120 121-240	443	89 87 89 90 88	Full-term	Full expression	9-11 a.m	N.S.	N.S	N.S	N.S.	18-45	N.S.	N.S.	Monocyesis	Not
[65]	Beijing Suzhou, Jiangsu Guangzhou, Guangdong	Carotenoids (β-carotene , β-cryptoxanthin, lutein, lycopene, zeaxanthin) Tocopherols(α-tocopherol, γ-tocopherol)	UHPLC	0-4 5-11 12-30 31-60 61-120 121-240	540	77 89 73 90 90 90	Full-term	Full expression	9-11 a.m	N.S.	N.S	N.S	N.S.	18-45	N.S.	N.S.	Monocyesis	Not
[66]	Chengdu, Sichuan Shanghai Tianjin Guangzhou, Guangdong Changchun, Jilin Lanzhou, Gansu	Carotenoids (β-carotene , β-cryptoxanthin, lutein, lycopene, zeaxanthin)	HPLC	40-45	612	612	Full-term	Full expression	8-11 a.m	N.S.	N.S	N.S	N.S.	20-35	N.S.	N.S.	Monocyesis	N.S.
[18]	Beijing	Vitamin A, Vitamin B_1, Vitamin B_2; Vitamin C; Nicotinic acid	FS ; 2, 4-nitrobenzene trap method; Microbiological method	0-30 31-60 61-90 91-120 121-150 151-180 181-	152	7 29 26 31 22 29 8	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	Urba (42.3 %)	21-38	N.S.	Primiparae	N.S.	Not

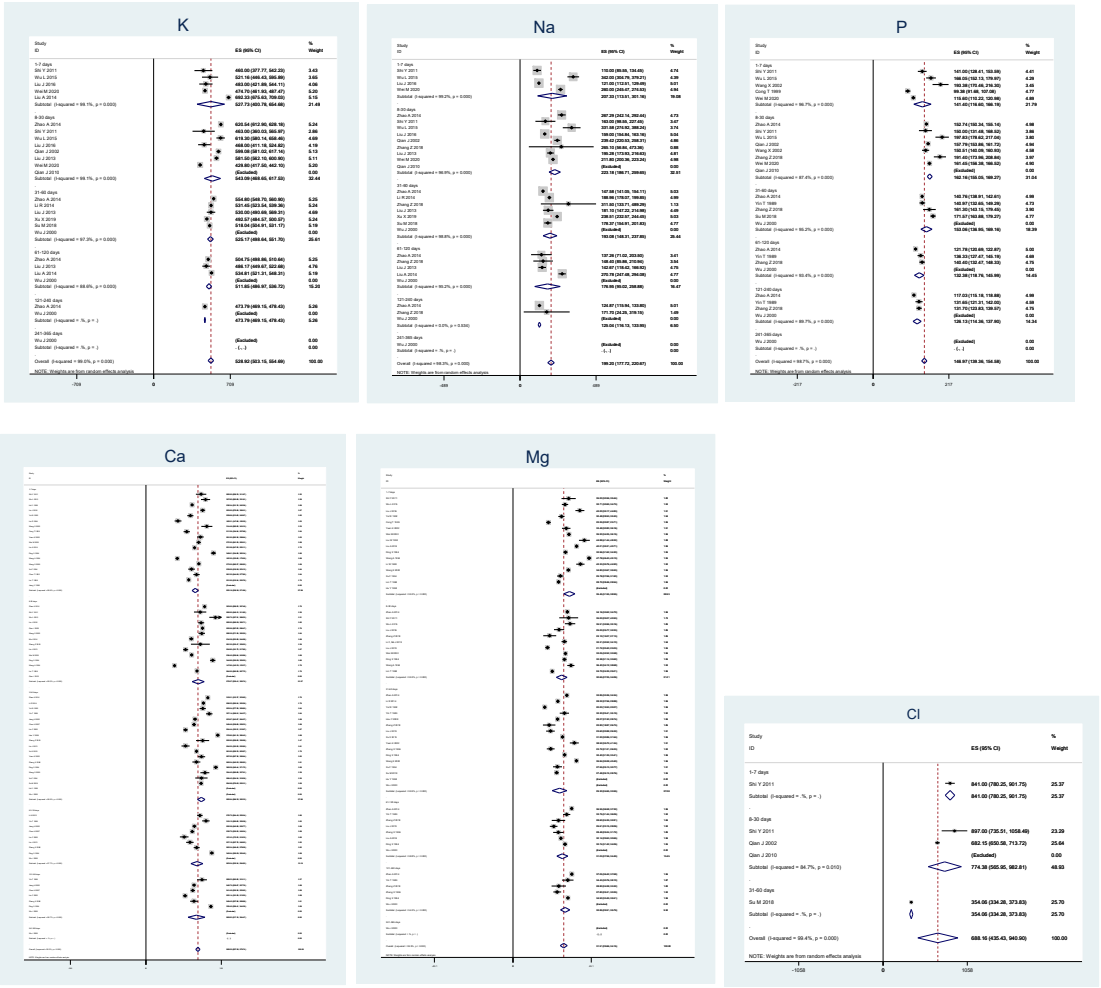
[19]	Nanning, Guangxi	Vitamin A	Microspectrofluorometry	0-30 31-60 61-90 91-120 121-150 151-180	120	18 21 19 20 21 21	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	Urban	N.S.	N.S.	Primiparae	N.S.	Not
[2]	Inner Mongolia	Vitamin C, Vitamin B_1, Vitamin B_2, Vitamin B_6, Nicotinic acid, Folic acid, Pantothenic acid, Vitamin A, Vitamin D, Vitamin E, Vitamin K	HPLC	3-7 8-21 22-180	66	7; 7 66	Full-term	Full expression	N.S.	N.S.	N.S.	N.S.	N.S.	28.3±3.9	N.S.	Primiparae (83.3%)	N.S.	N.S.
[67]	Hohhot, Inner Mongolia	Vitamin C, Vitamin B_1, Vitamin B_2, Vitamin B_6, Nicotinic acid, Pantothenic acid, Vitamin A, Vitamin D, Vitamin E, Vitamin K	HPLC	3-7 8-21 22-180	53	5 20 38	N.S	N.S	N.S.	N.S.	N.S	N.S	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[3]	Qiqihar, Heilongjiang	Vitamin A, Vitamin E; Vitamin B_1, Vitamin B_2	HPLC; FS	1-7 8-14 15-180	142	Vitamin A, Vitamin E, Vitamin B_1, Vitamin B_2 (n=4, 4, 26, 26); Vitamin B_1, Vitamin B_2 (n=23,	Full-term	Full expression	N.S.	N.S.	N.S.	N.S.	N.S.	18-40	N.S.	N.S.	N.S.	Not

						23); Vitamin A, Vitamin E, Vitamin B_1, Vitamin B_2 (n=4, 4, 23, 23)												
[68]	Hohhot, Inner Mongolia	Vitamin A, Vitamin D, Vitamin E	HPLC	3-7 16-30	70	Vitamin A, Vitamin D, Vitamin E (n=37, 42, 36); Vitamin A, Vitamin D, Vitamin E (n=33, 43, 32)	Full-term	N.S	N.S.	N.S.	N.S	N.S	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[69]	Nanning, Guangxi	Vitamin B_{12}	RIA	5	125	125	Full-term	N.S	N.S.	N.S.	Zhuang, Han, Yao	N.S	N.S.	25-30	N.S.	N.S.	N.S.	N.S.
[25]	Tangshan, Hebei	Vitamin C; Vitamin B_1, Vitamin B_2, Nicotinic acid	FS; HPLC	31-60 61-120 121-180 0-180	40	7 7 10 40	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[70]	Hohhot, Inner Mongolia	Vitamin B_1, Vitamin B_2, Nicotinic acid	HPLC	1-7 16-30	84	Vitamin B_1, Vitamin B_2, Nicoti	Full-term	N.S	N.S.	N.S.	N.S	N.S	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

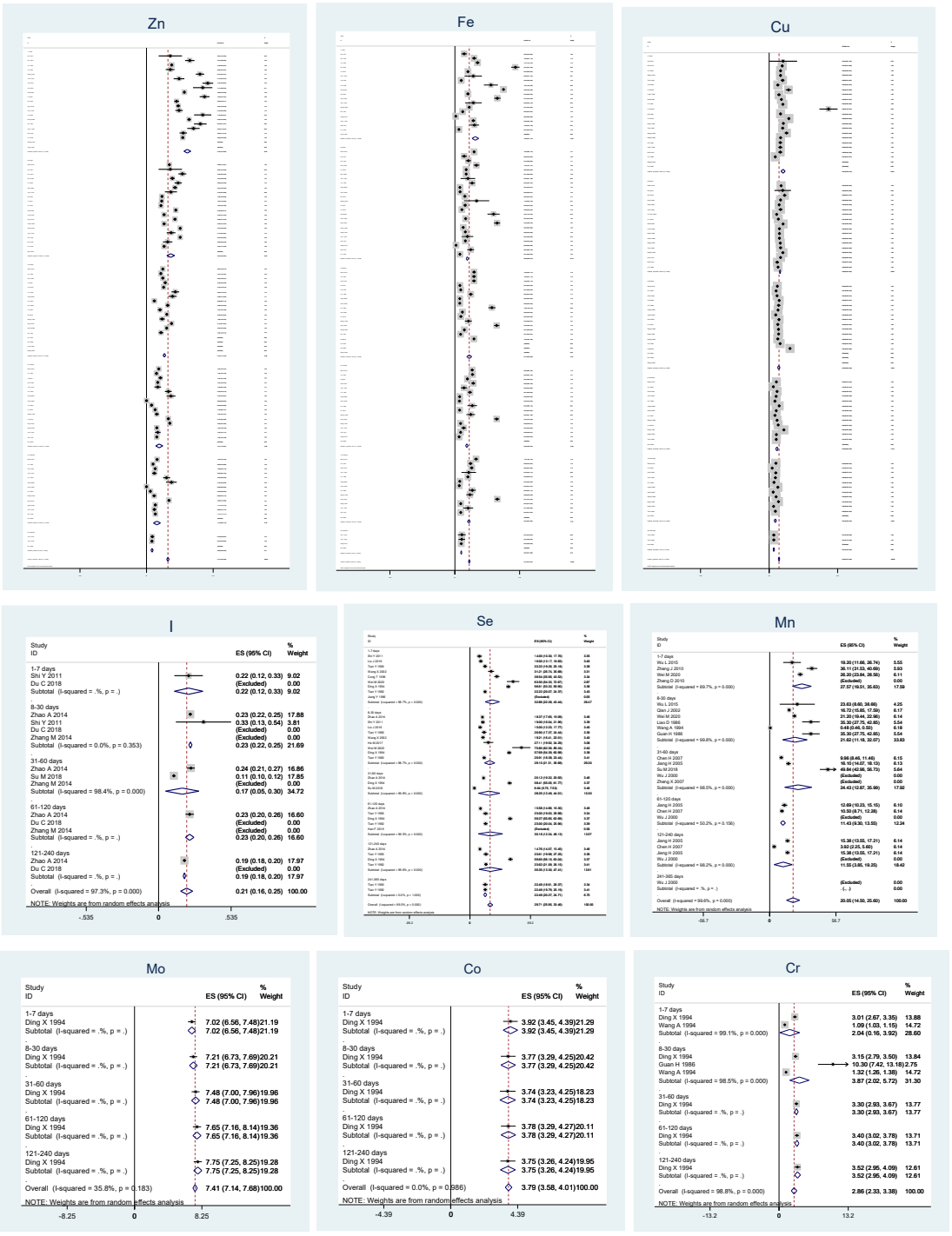
						nic acid (n=40, 17, 41); Vitamin B_1, Vitamin B_2, Nicotinic acid (n=20, 33, 43)											
[71]	Zhoushan, Zhejiang	Vitamin A	HPLC	1-15 6-14 15-90 91-180	365	106 85 91 83	N.S.	N.S.	N.S.	N.S.	N.S.	Not	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[20]	Guangxi	Vitamin A	Microspectrofluorometry	0-30 31-60 61-90 91-120-12 1-150 151-180	240	35 42 40 41 41 42	N.S.	N.S.	N.S.	N.S.	Dong, Han	N.S.	N.S.	20-35	N.S.	N.S.	N.S.	Not
[72]	Shanghai	α-tocopherol	HPLC	1-5 10-15 40-45	89	89	Full-term	Full expression	9-11 a.m	N.S.	N.S.	N.S.	N.S.	20-35	N.S.	N.S.	Monocyesis	Not
[73]	Guilin, Guangxi	Vitamin E	HPLC	2-4	12	12	N.S.	N.S.	8 a.m, 6 p.m	N.S.	N.S.	Not	N.S.	24-32	N.S.	N.S.	N.S.	Not
[74]	Hangzhou, Zhejiang Lanzhou, Gansu Beijing	Vitamin A, α-tocopherol	HPLC	1 14 42	102	102	Full-term	N.S.	10-11 a.m	N.S.	N.S.	Yes	N.S.	20-35	N.S.	N.S.	N.S.	Not
[75]	China	Vitamin A	HPLC	74±5		52	Full-term	N.S.	N.S.	N.S.	N.S.	Not	N.S.	18-40	N.S.	N.S.	Monocyesis	Not
[76]	Guilin, Guangxi	α-tocopherol	HPLC	2-3 4-5 6-7 8-12	43	14 16 8 5	Full-term	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
[77]	Shangha	Tocopherol	HPLC	3±2	42	42	Full-te	Full	N.S.	N.S.	N.S.	N.S.	N.S.	18-40	N.S.	N.S.	Monocy	N.S.

	i	(α-tocopherol, β-tocopherol)		13±2 43±2		42 42	rm	expression									esis	
[58]	Shanghai	Vitamin B_1, Vitamin B_2, Vitamin B_6, Nicotinic acid, Vitamin A, Vitamin K, Vitamin E, Vitamin D	HPLC	42	130	130	Full-term	N.S.	N.S.	N.S.	N.S.	Yes	N.S.	N.S.	N.S.	N.S.	N.S.	Not
[78]	Wuxi, Jiangsu	Vitamin E (α-、β-、γ-、δ-tocopherol)	HPLC	1-7 8-14 >15	103	103 103 103	Full-term	N.S.	N.S.	N.S.	N.S.	Yes	N.S.	27.9±3.2	N.S.	N.S.	Monocyesis	N.S.

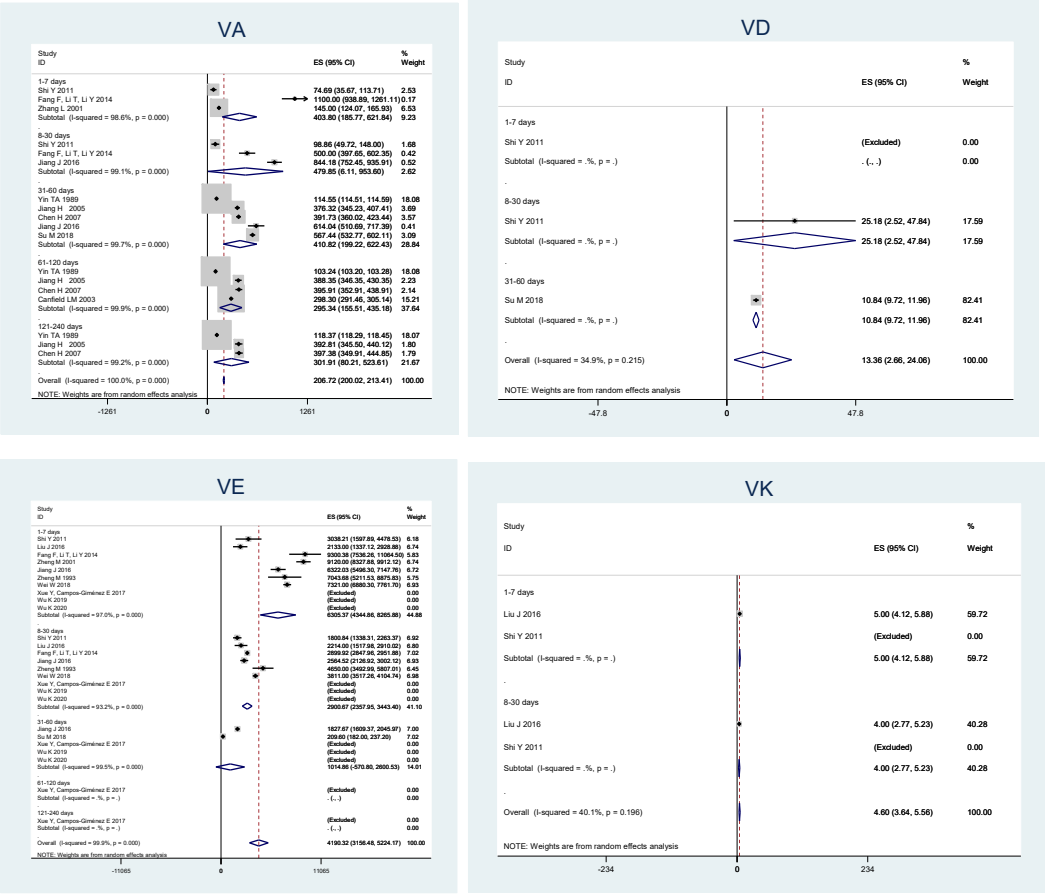
Note: UPLC-MS/MS (Ultra Performance Liquid Chromatography-Tandem Mass Spectrometry); HPLC-MS (High Performance Liquid Chromatography-Mass Spectrometry); UHPLC (Ultra-High Performance Liquid Chromatography); HPLC (High Performance Liquid Chromatography); FS (Fluorescence spectrophotometer); RIA (Radioimmunoassay).



Supplementary Figure S1. Forest plot of comparison of macro mineral elements concentrations



Supplementary Figure S2. Forest plot of comparison of trace elements concentrations



Supplementary Figure S3. Forest plot of comparison of fat-soluble vitamins concentrations



Supplementary Figure S4. Forest plot of comparison of water-soluble vitamins concentrations

Supplementary Table S4. Longitudinal changes in mineral and vitamin concentrations in human milk in Chinese population

	1-7 days			8-30 days			31-60 days			61-120 days			120-240 days			240-365 days		
	Mean	SE	n	Mean	SE	n	Mean	SE	n	Mean	SE	n	Mean	SE	n	Mean	SE	n
K	610.7	26.6	572	546.5	19.2	1022	512.5	12	2044	515.2	18.4	873	473.8	2.4	444	NA	NA	NA
Na	257.3	18.8	220	238.1	10.3	1053	209	5.2	2051	191.1	19	883	125.9	7.6	454	NA	NA	NA
Ca	260.2	6.7	1873	273.5	8.7	1568	292.2	5.7	3315	274.3	15.7	489	284.2	19.8	312	NA	NA	NA
P	125	7.7	304	157.5	6	976	147.7	6.9	601	123.5	5.9	502	118.8	5.7	499	NA	NA	NA
Mg	35.3	0.9	1795	32.4	1.1	1317	32.4	0.6	3228	32.9	1.1	1104	35.5	1.5	679	NA	NA	NA
Cl	841	31	7	694	64	127	354.1	32.2	130	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zn	5.38	0.15	1685	3.13	0.1	1719	2.44	0.05	3215	1.78	0.05	1833	1.41	0.05	1293	0.7	0.14	54
Fe	0.996	0.0419	1345	1.0012	0.0421	1592	0.7674	0.0242	2130	0.862	0.0339	1451	1.0199	0.0417	1256	0.3567	0.0522	103
Cu	0.6045	0.0175	2052	0.5079	0.0157	1663	0.3999	0.0107	1853	0.3542	0.0109	1710	0.2897	0.0107	1226	0.2096	0.0377	54
I	0.221	0.054	7	0.2355	0.0127	451	0.2095	0.0147	574	0.2291	0.0162	444	0.1902	0.0047	444	NA	NA	NA
Se	0.0426	0.0027	311	0.0325	0.0018	898	0.0241	0.0012	691	0.0245	0.0013	615	0.0241	0.0013	615	0.0225	0.0039	54
Mn	0.0308	0.002	407	0.0192	0.0012	587	0.0368	0.0046	183	0.0108	0.0015	120	0.0132	0.002	104	NA	NA	NA
Mo	0.007	0.0002	117	0.0072	0.0005	234	0.0075	0.0002	117	0.0077	0.0003	117	0.0078	0.0003	117	NA	NA	NA
Co	0.0039	0.0002	117	0.0038	0.0003	234	0.0037	0.0003	117	0.0038	0.0002	117	0.0038	0.0003	117	NA	NA	NA
Cr	0.0023	0.0002	185	0.0032	0.0003	313	0.0033	0.0002	117	0.0034	0.0002	117	0.0035	0.0003	117	NA	NA	NA
Sr	0.8669	NA	117	0.8359	NA	234	0.8153	NA	117	0.7946	NA	117	0.743	NA	117	NA	NA	NA
F	NA	NA	NA	0.0804	NA	9	NA	NA	NA	0.0636	NA	15	NA	NA	NA	NA	NA	NA
Ba	NA	NA	NA	NA	NA	NA	0.01	NA	1	0.0103	NA	4	0.0012	NA	5	0.03	NA	2
VA	867.3	74.1	261	727.5	72.9	142	505.2	40.2	325	305.8	30	222	310	36	181	NA	NA	NA
VD	NA	NA	NA	25.2	11.6	7	10.8	1	140	NA	NA	NA	NA	NA	NA	NA	NA	NA
VE	7071.8	483.8	303	3107.8	225.1	259	2609.5	258.4	232	NA	NA	NA	NA	NA	NA	NA	NA	NA
VK	5	0.4	5	4	0.6	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

VB1	16	1.3	1050	19.2	1	1208	67.1	7.8	125	74.8	8	131	54.2	3.4	330	NA	NA	NA
VB2	59.7	3.7	1027	81.8	4	1211	135.1	16.6	125	165.2	20	100	213.5	27	128	NA	NA	NA
VB6	16.6	2.3	984	36.3	1.8	1160	83.6	5.7	383	94.9	6	313	97.1	6	320	NA	NA	NA
Biotin	NA	NA	NA	9.9	0.8	87	7.2	0.5	89	6.4	0.5	90	6	0.7	88	NA	NA	NA
Folic acid	48.5	9.4	7	26.7	3.3	94	17.2	0.9	89	28.5	1.7	90	29.5	1.9	88	NA	NA	NA
Niacin	654	31.1	1020	1174.3	51.5	1198	2514.4	250.9	125	2075.8	199.3	157	2241.1	220.9	157	NA	NA	NA
Pantothenic acid	2196.9	165.1	498	3053.1	180.6	657	2410.8 (31-90 days)	97.9	164	2079.5 (91-180 days)	74.6	223	2125.4 (181-330 days)	74.2	212	NA	NA	NA
VC	16684	5654.4	12	18388.5	4450.2	22	34027.6	3705.1	166	44495.3	8047.1	69	43217.3	7831.2	69	NA	NA	NA

Supplementary Table S5. Shapiro-Wilk test

Mineral	*W*	*p*	Vitamin	*W*	*p*
K	0.936	0.12	VA	0.741	2.24×10^{-6}
Na	0.931	0.06	VD	0.782	0.07
Ca	0.981	0.22	VE	0.885	0.03
P	0.971	0.64	VB1	0.907	0.02
Mg	0.979	0.33	VB2	0.825	4.87×10^{-4}
Cl	0.896	0.39	VB6	0.923	0.11
Zn	0.919	1.70×10^{-6}	Biotin	0.866	0.28
Fe	0.842	8.67×10^{-11}	Folic acid	0.885	0.29
Cu	0.638	1.68×10^{-15}	Niacin	0.931	0.09
I	0.939	0.60	Pantothenic acid	0.918	0.27
Se	0.820	1.81×10^{-5}	VC	0.881	0.04
Mn	0.901	0.02			
Mo	0.944	0.69			
Co	0.772	0.03			
Cr	0.678	7.81×10^{-4}			

Note: $p>0.05$ indicates that the normal distribution is satisfied

Supplementary Table S6. Comparison of recommended dietary intakes

	This review-Chinese human milk						DRIs for China		DRIs for America	
	1-7 days	8-30 days	31-60 days	61-120 days	1-120 days	121-240 days	0-6 month	7-12 month	0-6 month	7-12 month
K (mg/d)	458	410	384	386	400	355	400	600	400	860
Na (mg/d)	193	179	157	143	161	94	80	180	110	370
Ca (mg/d)	195	205	219	206	209	213	200	350	200	260
P (mg/d)	94	118	111	93	108	89	105	180	100	275
Mg (mg/d)	26	24	24	25	25	27	20	65	30	75
K/Na	2.4	2.3	2.4	2.7	2.5	3.8	-	-	-	-
Ca/P	2.1	1.7	2.0	2.2	1.9	2.4	-	-	-	-
Ca/Mg	7.5	8.5	9.1	8.2	8.5	7.9	-	-	-	-
K/Mg	17.6	17.1	16.0	15.4	16.2	13.1	-	-	-	-
P/Mg	3.6	4.9	4.6	3.7	4.4	3.3	-	-	-	-
Cl (mg/d)	631	521	266	-	398	-	120	450	180	570
Zn (mg/d)	4.04	2.35	1.83	1.34	2.27	1.06	1.5	3.2	2	3
Fe (mg/d)	0.75	0.75	0.58	0.65	0.67	0.76	0.3	10	0.27	11
Cu (mg/d)	0.45	0.38	0.30	0.27	0.35	0.22	0.3	0.3	0.20	0.22
I (μg/d)	166	177	157	172	168	143	85	115	110	130
Se (μg/d)	32	24	18	18	22	18	15	20	15	20
Mn (mg/d)	0.023	0.014	0.028	0.008	0.018	0.010	0.01	0.7	0.003	0.6
Mo (μg/d)	5.25	5.40	5.63	5.78	5.49	5.85	3	6	2	3
Cr (μg/d)	1.73	2.40	2.48	2.55	2.27	2.63	0.2	5	0.2	5.5
F (mg/d)	-	0.06	-	0.05	0.05	-	0.01	0.23	0.01	0.5

VA (μg RAE/d)	650	546	379	229	443	233	300	350	400	500
VD (μg/d)	-	19	8	-	9	-	10	10	10	10
VE (mg α-TE/d)	5.30	2.33	1.96	1.85	3	1.91	3	4	4	5
VE/VA	8.2	4.3	5.2	8.1	7.3	8.2	-	-	-	-
VK (μg/d)	3.8	3.0	-	-	3.3	-	2.0	10	2.0	2.5
VB_1 (mg/d)	-	-	0.1	0.1	0.1	-	0.1	0.3	0.2	0.3
VB_2 (mg/d)	-	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.3	0.4
VB_6 (mg/d)	-	-	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.3
Pantothenic acid (mg/d)	1.6	2.3	1.8	1.6	1.9	1.6	1.7	1.9	1.7	1.8
Niacin (mg/d)	0.5	0.9	1.9	1.6	0.8	1.7	1.0	2.0	2	4
Folic acid (μg DFE/d)	36	20	13	21	18	22	65	100	65	80
Biotin (μg/d)	-	7	5	5	6	5	5	10	5	6
VC (mg/d)	13	14	26	33	26	32	40	40	40	50

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