

Benchmarking of Commercially Produced Complementary Foods (CPCF) companies in Thailand

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Abbreviations

ATNI	Access to Nutrition Initiative
CPCF	Commercially Produced Complementary Foods
FOP	Front of pack
NPM	Adapted WHO Europe nutrient profile and promotion model for CPCF
UNICEF	United Nations Children's Fund
WHO	World Health Organization

About the Access to Nutrition Initiative

Access to Nutrition Initiative (ATNI) is an independent, not-for-profit organization established in 2013. It publishes independent, comprehensive analyses and commentary on companies' efforts to improve consumers' access to nutritious foods and beverages, both globally and within specific markets. Assessing producers of breast-milk substitutes and complementary foods is an integral part of ATNI's work. During its research, ATNI collaborates with a wide range of stakeholders, including the investment community, to ensure that its Indexes and reports are useful tools as they engage with and invest in companies.

About the Southeast Asia Consortium for Improving Complementary Foods (COMMIT)

The COMMIT initiative is a consortium of organizations¹ that have been working together since 2020 to improve the quality of Commercially Produced Complementary Foods (CPCF) in Southeast Asia. COMMIT aimed to address the need for a strong evidence base on CPCF through different workstreams, including reviews of existing national legislation and standards for CPCF, micronutrient landscape analyses, understanding caregivers' perceptions of CPCF, and assessments of CPCF using an adapted World Health Organization (WHO) Europe nutrient profile and promotion model for CPCF (NPM) for these products sold in the capital cities and through online retailers in seven Southeast Asian countries. COMMIT's work spans across the following countries: Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, and Viet Nam. The findings from COMMIT's different workstreams will be used to provide technical support for improving complementary feeding through three main platforms, namely strengthening, or developing government regulations on CPCF, building consumer awareness on CPCF, and encouraging industry reformulation of CPCF to meet nutrient composition and labeling requirements.

¹ COMMIT partners include Access to Nutrition Initiative; Alive & Thrive; Helen Keller International; JB Consultancy; School of Food Science, University of Leeds, UNICEF East Asia Pacific Regional Office (EAPRO), WFP Regional Bureau, Bangkok (WFP RBB) and WHO Southeast Asia Regional Office (SEARO) (observer).



1. Context: Thailand's complementary foods market

The market for CPCF is well-established in Thailand, reaching over USD 26 million in sales in 2022 (see Figure 1). CPCF sales increased by over 60% from 2012 to 2019 and then decreased by around 14% from 2019 to 2022. In 2022, the majority of CPCF sales corresponded to 'dried' baby food (over USD 16 million), followed by 'prepared' baby food (over USD 9 million) (see Box 1 for CPCF categories as defined in the Euromonitor International database).

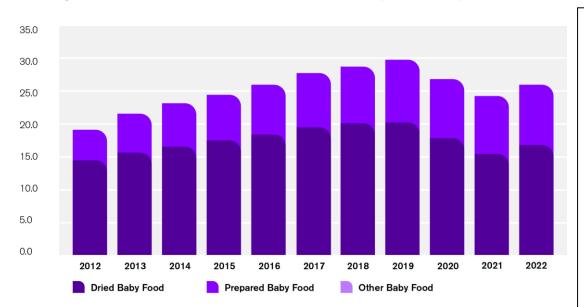


Figure 1. CPCF market size in Thailand, 2012-2022 (USD million) *

Source: Euromonitor International 2012-2022. *No data was available for 'Other baby food'

Box 1. Euromonitor International baby food category definitions

Baby food: This is the aggregation of milk formula, prepared, dried, and other baby food.

Dried baby food: Products which require the addition of water before consumption, and which are usually sold in packets. Cereals and dehydrated soups are also included. Please note that retail volumes are shown in terms of as sold and are not reconstituted volumes. **Prepared baby food:** Baby products sold in jars, cans, or retort flexible pouches which do not require any cooking preparation other than heating. Includes puréed food, yogurts, chilled desserts, soup, desserts, and ice cream marketed for babies.

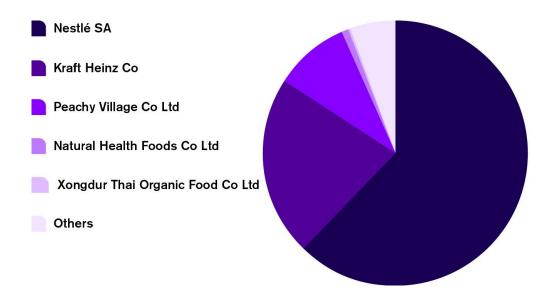
Other baby food: Any other products marketed for babies are included here; examples may include baby rusks, teething biscuits, baby fruit juices, baby herbal tea, etc.

Note: Euromonitor International's categorization of CPCF does not align with World Health Organization (WHO) Europe's CPCF categorization as described in its draft nutrient profiling model.



According to Euromonitor International, in 2022, Nestlé accounted for well over 60% of the CPCF market in Thailand, followed by Kraft Heinz with a share of over 22%. The remaining companies collectively accounted for the remaining small market share. In 2022, the majority of CPCF brand share is taken by Nestlé's Cerelac brand (62%), followed by Kraft Heinz Co. (21.8%) (Figure 2).

Figure 2. Company shares of the CPCF market in Thailand in 2022 (USD million)



Source: Euromonitor International 2022

2. Findings

The study used a cross-sectional design to gather data on CPCF nutrient content and labeling practices in Bangkok, Thailand. A total of 233 unique CPCF products were found, of which 27 were excluded because they did not fit the CPCF study definition (n=4) or did not include nutritional information (n=23). A final count of 206 CPCF products was included in this analysis.

A final count of 206 CPCF products were included and belonged to 34 companies; the majority of which (27 out of 34) were headquartered in Thailand and the rest in Belarus, Korea New Zealand, and Switzerland. The largest percentage of products belonged to Peachy Village Co., Ltd., with its Peachy products (12.1%), followed by Healthy Foods Co., Ltd. with its Apple Monkey products (7.3%) and Natural Health Foods Company Ltd. with its Baby Natura (6.8%) (see Table 1). A large percentage of products (42.2%) were within the categories 'finger foods and snacks' followed by 'soft-wet spoonable' (26.7%) and 'dry, powdered and instant cereal/starchy food' (16.5%) (see Annex 1). Of these products, 182 were assessed against the NPM. The remaining products (manufactured by Joe-Ry Family Co., Ltd. N=2)) were not assessed further (i.e., no nutrient composition or and labelling assessment was undertaken) and automatically 'failed' the NPM as they were category 4.1 (confectionery, sweet spreads and fruit chews) products which should not be promoted to children under 3 years of age. In addition, 22 products fell under category 6.1 'other' and were not able to be classified within the NPM categories, so were also excluded (see Table 1).

2.1 Products by company

Table 1. CPCF by parent company name, headquarters, and brand name (grouped by headquarter location in alphabetical order) $(n=206)^*$

Parent company	Headquarters	Brand name	% (n)	Category of products (n)
Belfood	Belarus	Bambolina	1.9% (4)	2: soft wet spoonable (4)
Ispoon	Korea	Ispoon	0.5% (1)	4: finger foods and snacks (1)
Silver Spoon Gourmet Co. Ltd	Korea	Happy Spoon	1.0% (2)	? 6: others (2)
Pyeongdong-ro	Korea	Bebedang	1.5% (3)	4: finger foods and snacks (3)
Only Organic	New Zealand	Only Organic	2.4% (5)	2: soft wet spoonable (5)
Hero Group	Switzerland	Organix	1.5% (3)	4: finger foods and snacks (3)
Nestlé	Switzerland	Nestlé	4.4% (9)	1: dry instant starch (7) 4: finger foods and snacks (2)
Albatross Co.,Ltd.	Thailand	Bebby	3.4% (7)	2: soft wet spoonable (5) ? 6: others (2)
Berli Jucker Foods Ltd.	Thailand	Dozo	2.9% (6)	4: finger foods and snacks (6)
Doctor Rice	Thailand	Khao Khun Mor	0.5% (1)	1: dry instant starch (1)
Goodfriends Food Innotech Co.,Ltd.	Thailand	Cubbe	1.5% (3)	4: finger foods and snacks (3)
Green One Food company	Thailand	Bebekim	4.4% (9)	4: finger foods and snacks (9)
Greenday Global Co.,Ltd.	Thailand	Greenday kids	1.0% (2)	4: finger foods and snacks (2)
Healthy Foods Co.,Ltd.	Thailand	Apple Monkey	7.3% (15)	4: finger foods and snacks (15)
Homey (Thailand) Co., Ltd.	Thailand	Uncle Mark	0.5% (1)	4: finger foods and snacks (1)
llamoon Co.,Ltd.	Thailand	Organeh	5.8% (12)	1: dry instant starch (3) 4: finger foods and snacks (6) ? 6: others (3)
Jinny	Thailand	Jinny	3.9% (8)	? 6: others (8)
Joe-Ry Family Co.Ltd.	Thailand	Wel-B	1.0% (2)	4: finger foods and snacks (2) × all were '4.1'
KiddiFish	Thailand	KiddiFish	1.9% (4)	? 6: others (4)
Mama Cooks (Thailand) Co.,Ltd.	Thailand	Mama Cooks	3.9% (8)	1: dry instant starch (5) ? 6: others (3)
Namchow (Thailand) Co. Ltd	Thailand	Namchow	3.4% (7)	1: dry instant starch (2) 4: finger foods and snacks (5)
Natural Health Foods Company Ltd.	Thailand	Baby Natura	6.8% (14)	1: dry instant starch (7) 4: finger foods and snacks (7)
Nutri-Five Food Co.,Ltd.	Thailand	Eiyo	1.0% (2)	1: dry instant starch (2)
Octa Foods Company Ltd.	Thailand	Hooray	5.3% (11)	2: soft wet spoonable (8) 3: meals with chunky pieces (3)
Peachy Village Co., Ltd.	Thailand	Peachy	12.1% (25)	2: soft wet spoonable (17) 4: finger foods and snacks (8)
Sahapan Century Co.,Ltd.	Thailand	Picnic Baby	4.4% (9)	2: soft wet spoonable (4) 3: meals with chunky pieces (5)
Summer Sky Co.,Ltd.	Thailand	Be Delight	2.4% (5)	2: soft wet spoonable (1) 4: finger foods and snacks (4)
		SweetPea	0.5% (1)	4: finger foods and snacks (1)
T.Man Pharma Co.,Ltd.	Thailand	FiberMate Crispy	0.5% (1)	4: finger foods and snacks (1)
Variety Foods International Co.,Ltd.	Thailand	Brice	1.0% (2)	4: finger foods and snacks (2)
Xongdur Thai Organic Food Co.,Ltd.	Thailand	Xongdur Baby	5.3% (11)	1: dry instant starch (6) 4: finger foods and snacks (5)
Zen Kitchen Foods	Thailand	Baby Earth	1.0% (2)	2: soft wet spoonable (2)
P.Pattanachot Limited Partner- ship	Thailand	Happy Bear	0.5% (1)	1: dry instant starch (1)
Kraft Heinz Co	USA	Heinz	4. 9 % (10)	2: soft wet spoonable (9) 4: finger foods and snacks (1)
	Total number	er of unique CPCF	100.0% (206)	

* Note that Products highlighted in light purple were identified as local companies. In this report, local companies refer to companies headquartered in

Thailand.

X = These products fell under the 4.1 category (confectionery, sweet spreads and fruit chews) which should not be promoted to children < 3 years of age and thus automatically 'failed' the NPM.

? = These products are of the 6.1 'other' category of the NPM which are not assessed against the nutrient composition and labelling requirements. 'Others' included a variety of food powders (also called 'floss') meant to be sprinkled onto food (e.g., chicken liver powder, salmon floss, tilapia floss, veggie, and chicken seasoning powder) as well as stocks.

2.2 Combined results: nutrient composition and labeling practices

A total of 29 companies produced the 182 CPCF assessed using the NPM. As shown in Table 2, none of them met both nutrient composition and labeling requirements of the NPM. Thus, no CPCF were found to be suitable for promotion for older infants and young children between six to 36 months of age. When observed separately, none of the products passed all labeling requirements, but some companies performed better than others against the nutrient composition requirements:

- Of 182 CPCF products assessed, 54 met all nutritional thresholds and based on the NPM, were considered as being of appropriate nutritional quality.
- Most products meeting all relevant nutritional requirements (n=54) are in the following CPCF categories: 'other snacks and finger food' (n=18), 'dry instant starch' (n=15), and fruit purée' (n=10).
- All products marketed by the following seven companies met all applicable nutrient composition thresholds: Doctor Rice, Goodfriends Food, Green One Food Company, Ispoon, Nutri-Five Food Co., Ltd., Only Organic, and Pyeongdong-ro.
- Four companies had between 50% and 80% of their assessed CPCF meet all applicable nutrient composition thresholds.
- Five companies had between 3% and 16% of their products meet the nutrient composition thresholds.
- Thirteen companies' products did not meet **any** of the applicable nutrient composition thresholds.
- Of those products that did not meet any nutritional thresholds (n=128), the majority belonged to the categories 'other snacks and finger food' (n=62), 'dry instant starch' (n=19), and 'fruit purée' (n=15).

Table 2. Nutrient composition and labeling practices assessment. combined nutrient profiling outcome*

Company	Number of products	% met all relevant nutrient composition requirements	% met all relevant labeling requirements	% met all requirements
Albatross Co.,Ltd.	5	20.0%	0.0%	0.0%
Belfood	4	75.0%	0.0%	0.0%
Berli Jucker Foods Ltd.	6	16.7%	0.0%	0.0%
Doctor Rice	1	100.0%	0.0%	0.0%
Goodfriends Food Innotech Co.,Ltd.	3	100.0%	0.0%	0.0%
Green One Food company	9	100.0%	0.0%	0.0%
Greenday Global Co.,Ltd.	2	0.0%	0.0%	0.0%
Healthy Foods Co.,Ltd.	15	0.0%	0.0%	0.0%
Hero Group	3	0.0%	0.0%	0.0%
Homey (Thailand) Co.,Ltd.	1	0.0%	0.0%	0.0%
Ilamoon Co.,Ltd.	9	33.3%	0.0%	0.0%
Ispoon	1	100.0%	0.0%	0.0%
Kraft Heinz Co	10	0.0%	0.0%	0.0%
Mama Cooks (Thailand) Co.,Ltd.	5	80.0%	0.0%	0.0%
Namchow (Thailand) Ltd.	7	0.0%	0.0%	0.0%
Natural Health Foods Company Ltd.	14	50.0%	0.0%	0.0%
Nestlé	9	0.0%	0.0%	0.0%
Nutri-Five Food Co.,Ltd.	2	100.0%	0.0%	0.0%
Octa Foods Company Ltd.	11	0.0%	0.0%	0.0%
Only Organic	5	100.0%	0.0%	0.0%
P.Pattanachot Limited Partnership	1	0.0%	0.0%	0.0%
Peachy Village Co.,Ltd.	25	16.0%	0.0%	0.0%
Pyeongdong-ro	3	100.0%	0.0%	0.0%
Sahapan Century Co.,Ltd.	9	33.3%	0.0%	0.0%
Summer Sky Co.,Ltd.	6	66.7%	0.0%	0.0%
T.Man Pharma Co.,Ltd.	1	0.0%	0.0%	0.0%
Variety Foods International Co.,Ltd.	2	0.0%	0.0%	0.0%
Xongdur Thai Organic Food Co.,Ltd.	11	0.0%	0.0%	0.0%
Zen Kitchen Foods	2	0.0%	0.0%	0.0%
Total number of products meeting CPCF requirements	182	29.7% (54)	0.0% (0)	0.0% (0)

*Only applicable to products assessed against the NPM (n=182), i.e., excludes product categories 4.1 and 6.1

2.3 Nutrient composition results

Table 3 shows the proportion of each company's CPCF products that met each of the seven nutrient composition thresholds. With regards to thresholds applicable to all CPCF product types:

- Most products (96%) met total **fat** requirements except for some belonging to Healthy Foods Co., Ltd. (n=2), Greenday Global Co., Ltd. (n=1), Ilamoon Co., Ltd. (n=1), and Peachy Village Co., Ltd. (n=3).
- Almost half (49%) met **the sodium** criteria, with all products from 11 companies meeting this requirement, although seven companies did not meet it for any of their products.
- In addition, 69% met the 'no added sugar/sweeteners' requirements, with more than half of companies (17 out of 29) meeting this criterion for all their products. However, three companies did not meet this threshold for any assessed CPCF products.

For the criteria assessed for specific categories:

- Around seven out of 10 companies' relevant CPCF products (75%) passed the 'low/no added fruit' requirements.
- Of products under the category 'other snacks and finger foods' (<15% energy from total sugar applicable to this category only), the majority (83.8%) met the required criterion of having <15% energy from total sugar.
- Further, more than half (56.4%) of all applicable CPCF products met the **energy density requirements**, but the sole company to achieve this for all their products was Only Organic.
- A relatively high adherence (87.1%) was observed for products that met the required **protein** levels, with most companies (11 out of 15) meeting this requirement for all their applicable products.

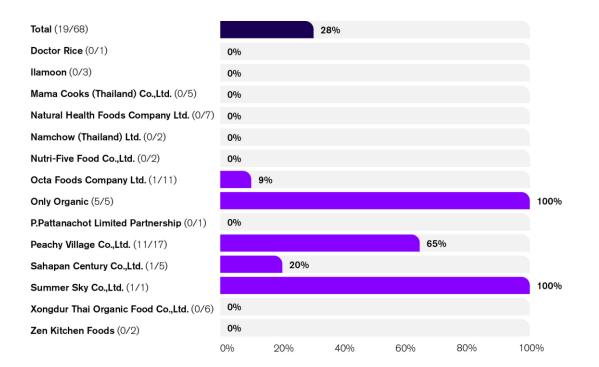
		Criteria assessed for all categories			Criteria assessed for specific categories			
Company	Number of products	% products with no added sugar/ sweeteners	% products meeting sodium thresholds	% products meeting total fat thresholds	Products with low/no added fruit % (n)	Products with <15% total E from total sugar % (n)	Products meeting E density thresholds % (n)	Products meeting protein thresholds % (n)
Albatross Co.,Ltd.	5	100.0%	60.0%	100.0%	80.0% (4)	-	40.0% (2)	100.0% (3)
Belfood	4	100.0%	100.0%	100.0%	-	-	75.0% (3)	-
Berli Jucker Foods Ltd.	6	33.3%	16.7%	100.0%	-	100.0% (6)	-	-
Doctor Rice	1	100.0%	100.0%	100.0%	100.0% (1)	-	-	100.0% (1)
Goodfriends Food Innotech CoLtd.	3	100.0%	100.0%	100.0%	-	-	-	-
Green One Food company	9	100.0%	100.0%	100.0%	-	100.0% (9)	-	-
Greenday Global Co.,Ltd.	2	50.0%	50.0%	50.0%	-	0.0% (0)	-	<u></u>
Healthy Foods Co.,Ltd.	15	26.7%	0.0%	86.7%	-	73.3% (11)	-	-
Hero Group	3	33.3%	0.0%	100.0%	-	66.7% (2)		-
Homey (Thailand) Co.,Ltd.	1	0.0%	100.0%	100.0%	-	100.0% (1)	-	-
llamoon CoLtd.	9	100.0%	33.3%	88.9%	100.0% (3)	83.3% (5)	-	100.0% (3)
Ispoon	1	100.0%	100.0%	100.0%	-	100.0% (1)	-	-
Kraft Heinz Co	10	60.0%	0.0%	100.0%	100.0% (4)	100.0% (1)	77.8% (7)	-
Mama Cooks (Thailand) Co.,Ltd.	5	100.0%	100.0%	100.0%	80.0% (4)	3 .	-	100.0% (5)
Namchow (Thailand) Ltd.	7	28.6%	57.1%	100.0%	0.0% (0)	100.0% (5)	-	100.0% (2)
Natural Health Foods Compa- ny Ltd.	14	85.7%	85.7%	100.0%	71.4% (5)	66.7% (4)	-	100.0% (7)
Nestlé	9	0.0%	77.8%	100.0%	28.6% (2)	100.0% (2)	-	100.0% (7)
Nutri-Five Food Co.,Ltd.	2	100.0%	100.0%	100.0%	100.0% (2)	-	-	100.0% (2)
Octa Foods Company Ltd.	11	100.0%	0.0%	100.0%	100.0% (11)	-	37.5% (3)	87.5% (7)
Only Organic	5	100.0%	100.0%	100.0%	100.0% (1)	-	100.0% (5)	100.0% (1)
P.Pattanachot Limited Partner- ship	1	100.0%	100.0%	100.0%	0.0% (0)	•	-	100.0% (1)
Peachy Village Co.,Ltd.	25	52.0%	44.0%	88.0%	50.0% (3)	87.5% (7)	52.9% (9)	80.0% (4)
Pyeongdong-ro	3	100.0%	100.0%	100.0%	-	100.0% (3)	-	÷
Sahapan Century Co.,Ltd.	9	100.0%	33.3%	100.0%	100.0% (9)	-	50.0% (2)	55.6% (5)
Summer Sky Co.,Ltd.	6	100.0%	66.7%	100.0%	8	100.0% (4)	0.0% (0)	-
T.Man Pharma Co.,Ltd.	1	100.0%	0.0%	0.0%	-	0.0% (0)	-	-
Variety Foods International Co.,Ltd.	2	100.0%	0.0%	100.0%		100.0% (2)		H
Xongdur Thai Organic Food Co.,Ltd.	11	63.6%	45.5%	100.0%	50.0% (3)	100.0% (4)	-	100.0% (6)
Zen Kitchen Foods	2	0.0%	0.0%	100.0%	100.0% (2)	-	0.0% (0)	0.0% (0)
Total products that meet applicable nutrient thresholds	182	68.7% (125)	48.9% (89)	95.6% (174)	75.0% (54)	83.8% (67)	56.4% (31)	87.1% (54)
Total products to each re	applicable equirement	182	182	182	72	80	55	62

Table 3. Proportion of products that met applicable nutrient thresholds per company*

*Where no value is presented, the '-' indicates that the NPM requirement was not applicable to the company's CPCF product type(s).

The NPM also assessed products to determine whether they would require front of pack (FOP) 'high sugar' warning label. A 'high sugar' warning label would be required if the percentage energy from total sugar content exceeds category-specific thresholds. The 'high sugar' warning applied to all categories of CPCF products, except for category 4.3 'snacks/finger foods', to which a total sugar threshold was applied (as seen in Table 3). A total of 68 CPCF product labels declared total sugar content and were thus assessed against this additional threshold. Of the 68 products, 28% would require a 'high sugar' FOP warning as the energy percentage from total sugar content exceeded the category-specific thresholds. Products belonging to nine companies did not require a 'high sugar' FOP label, although two companies required it for all their products. The rest of the companies had between 9% and 65% of their products requiring such a warning label, based on the high proportion of 'empty' calories contributed by the products' total sugar content (Figure 3).

Figure 3. Percentage of products that required a 'high sugar' FOP label*



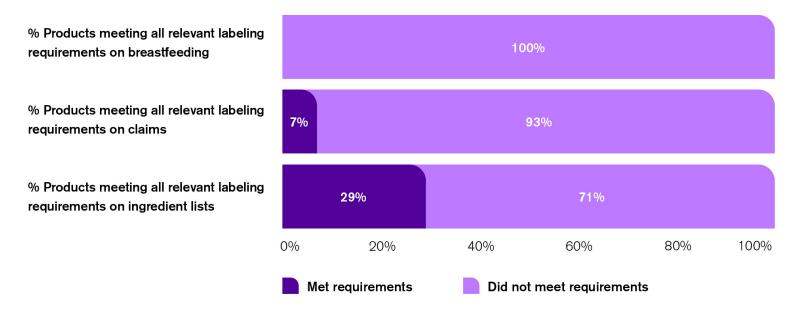
*Out of 182 applicable products that declared total sugar content on labels, 68 products require this warning label. A FOP 'high sugar' warning was required if the percentage energy from total sugar content is \geq the threshold for that product category: 1.1: 40%; 2.1/2.2/2.3: 30%; 2.4: 20%; 2.5/2.6/2.7/3.1/3.2: 15%.



2.4 Labeling assessment results

None of the companies' products met all labeling requirements (i.e., protection and promotion of breastfeeding, claims and ingredient list clarity). As seen in Figure 4, none of them met all labeling criteria for the **protection and promotion of breastfeeding**, and 7% met all labeling requirements on **claims**. A relatively higher percentage (29%) of companies' products met all labeling criteria on **ingredient list clarity**.

Figure 4. Percentage of products meeting all labeling requirements on the protection and promotion of breastfeeding, claims and ingredient lists clarity



2.4.1 Labeling requirements on breastfeeding

None of the products met all labeling requirements on the protection and promotion of breastfeeding, because only one product - from Goodfriends Food Innotech Co., Ltd. - included a message on the importance of continued breastfeeding up to two years of age or beyond. In addition, 70.9% of products included a minimum recommended age of introduction of at least six months, while the rest (29.1%) used images or text that suggested suitability for



infants under six months of age. Most products (99.5%) were not promoted as being **suitable for consumption by infants younger than six months** – with only one product from Berli Jucker Foods Ltd. not meeting this requirement. Almost all products (99.5%) **did not suggest superiority or equivalence to breast-milk**, except one product belonging to Natural Health Foods Company Ltd. Moreover, all 182 CPCF products assessed **do not recommend or promote bottle feeding** (See Annex 2 for specific criteria).

2.4.2 Labeling requirements on claims

Of all 182 products, 12 met all labeling requirements on claims, and all products from the Korean companies lspoon (n=1) and Pyeongdong-ro (n=3) met this criterion. A relatively small percentage of all products (20.3%) did not contain **non-permitted compositional claims** – with all products from three companies (lspoon n=1, Pyeongdong-ro n=3, Zen Kitchen Foods n=2) not having such claims. A higher adherence was observed for labeling requirements of **nutrient content claims**, as 65.4% of products belonging to 21 out of 29 companies did not show such claims. Of these, 13 companies did not show nutrient content claims on any of their products. The majority (84.1%) did not present **nutrient function claims**, and none of the products had **disease risk reduction claims**. In addition, relatively few products (n=27) did not present **other claims**: most companies (21 out of 29) included **other claims** in at least one product (See Annex 3 for specific criteria).

2.4.3 Labeling requirements on product name and ingredient list clarity

Almost 28% of companies' products met all labeling requirements on product name and ingredient list clarity (i.e. product name reflects ingredients in descending order as per ingredient list; fruit stated on ingredient list; percentage of added water stated on ingredient list; and percentage of protein stated on ingredient list), although no companies met these requirements for all their products. Of all companies, 30.8% presented products with the name reflecting **ingredients in descending order** as per the ingredient list – but 13 companies did not meet this criterion for any product. Almost all applicable products presented the **percentage of fruit** (99.2%) and the **percentage of added water** (90.5%). Only Peachy Village Co., Ltd. failed to present **the percentage of fruit** (n=1) **and added water** (n=4) for some of its products. The **percentage of protein** on the ingredient list was present in all applicable products (See Annex 4 for specific criteria).

2.4.4 Labeling requirements on blended/puréed products

Nine companies' products were assessed on labeling requirements specific for blended/puréed products, and none of those CPCF (n=55) met the criterion of **maximum recommended age of consumption of 12 months**. Among the blended/puréed CPCF, 25 had spouts and 72.0% of those had a statement informing that **children should not be allowed to suck from the container**. Peachy Village Co., Ltd. and Summer Sky Co., Ltd. were the only companies that presented this statement for all their products. Further, 10 out of 25 products with spouts had a '**choking hazard' warning label**. Of the companies assessed, Only Organic and Summer Sky Co., Ltd. presented this message in all their products (see Annex 5 for specific criteria).

3. Summary

- The market for CPCF is well-established in Thailand, reaching over USD 26 million sales in 2022. Yet, the results of this research show that **none** of the companies' CPCF products passed **both nutrient and labeling requirements** according to the NPM. Thus, none of the products is considered suitable to be promoted to older infants and young children between six to 36 months of age.
- A total of 206 CPCF products were included, of which 182 were assessed against the adapted NPM. Of the remaining products, two (belonging to Joe-Ry Family Co., Ltd.), fell under category 4.1. Products in this should not be promoted for children under three years of age, so automatically 'failed' the NPM. In addition, 22 products fell under category 6.1 'other', which were not able to be classified within the NPM categories, so were also excluded.
- CPCF products belonged to 34 companies, and the majority of CPCF companies (27 out 34) were headquartered in Thailand. The largest percentage of products belonged to Peachy Village Co., Ltd., (12.1%), followed by Healthy Foods Co. (7.3%) and Natural Health Foods Company Ltd. (6.8%).

Nutrient composition

- Of 182 CPCF products assessed, 54 met all nutritional thresholds and based on the NPM, were considered of appropriate nutritional quality.
- All products marketed by the following seven companies met all applicable nutrient composition thresholds: Doctor Rice, Goodfriends Food, Green One Food Company, Ispoon, Nutri-Five Food Co., Ltd., Only Organic, and Pyeongdong-ro. Thirteen companies' products did not meet **any** of the applicable nutrient composition thresholds. The remaining companies had between 3% and 80% of their CPCF assessed meeting all applicable nutrient composition.
- Most companies' products (96%) met total fat requirements, except for some (n=4) belonging to Healthy Foods Co., Ltd. (n=2), Greenday Global Co., Ltd. (n=1), Ilamoon Co., Ltd. (n=1), and Peachy Village Co. Ltd. (n=3). Almost half (49%) met sodium requirements, with all products from 11 companies meeting this criterion, although seven did not meet it for any of their products. Further, 69% met the no added sugar/sweeteners requirements: more than half of the companies (17 out of 29) met this requirement for all their products, although three companies did not meet this for any of their assessed CPCF products.
- Around seven out of 10 companies' relevant CPCF products (75%) passed the 'low/no added fruit' requirements. The majority (95.6%) met the required criterion of having <15% energy from total sugar. Further, while more than half (56.4%) of all applicable CPCF products met the energy density requirements, the sole company that met it for all its products was Only Organic. A relatively high adherence (87.1%) was observed for products that met the required protein levels, with most companies (11 out of 15) meeting this requirement for all their applicable products.
- Twenty-eight percent of assessed CPCF products needed a 'high sugar' FOP warning, as the percentage energy from total sugar content exceeded the category-specific thresholds. Products belonging to nine companies did not require a 'high sugar' FOP label and two companies' products required it for all their products.



Labeling practices

- None of the companies' products met all labeling requirements, and only 7% met all labeling requirements on claims. A relatively higher percentage (29%) of companies' products met all labeling requirements on **ingredient list clarity**.
- None of the assessed products met all labeling requirements on the protection and promotion of breastfeeding. Only one product, from Goodfriends Food Innotech Co., Ltd., included a message on the importance of continued breastfeeding up to two years of age or beyond. In addition, 70.9% of products included a minimum recommended age of introduction of at least six months. Most products (99.5%) were not marketed as being suitable for consumption by infants younger than six months: only one product (from Berli Jucker Foods Ltd.) did not meet this requirement. Almost all products (99.5%) did not suggest superiority or equivalence to breast milk, except one product belonging to Natural Health Foods Company Ltd. Moreover, all 182 CPCF products assessed do not recommend or promote bottle feeding.
- Of all 182 products, 12 met all labeling requirements on claims, and all products from the Korean companies Ispoon (n=1) and Pyeongdong-ro (n=3) met this requirement. A relatively small percentage of products (20.3%) did not contain **non-permitted compositional claims**. A higher adherence was observed for labeling requirements of **nutrient content claims**, as 65.4% of products belonging to 21 out of 29 companies did not show such claims. Of these, 13 companies did not show nutrient content claims for any of their products. The majority (84.1%) did not present **nutrient function claims**, and none of the products had **disease risk reduction claims**. In addition, a few companies (eight out of 29) did not include **other claims** in at least one product.
- Around one-third of companies' products met all labeling requirements on ingredient list clarity, but none of the companies met these criteria for all their products. Of all companies, 30.8% presented **ingredients in descending order** as per ingredient list 13 companies did not meet this criterion for any product. Almost all applicable products presented the **percentage of fruit** (99.2%) and the **percentage of added water** (90.5%). Only Peachy Village Co., Ltd. failed to present **the percentage of fruit** (n=1) **and added water** (n=4) for some of its products. The **percentage of protein** on the ingredient list was present in all applicable products.
- None of the 55 companies' products had the **maximum recommended age of consumption of 12 months**. Of CPCF with spouts, 72.0% had a statement informing that **children should not be allowed to suck from the container** with Peachy Village Co., Ltd. and Summer Sky Co., Ltd. being the only companies to present this statement on all their products. Further, 10 out of 25 products with spouts had a '**choking hazard' warning label** and, of the companies assessed, Only Organic and Summer Sky Co., Ltd. presented this message on all their products.

4. Annexes

Annex 1: Commercial complementary foods per NPM-defined category and subcategory (n=206)

Category	Subcategory	% (n)				
Category 1: Dry. Powe	dered. And instant cereal/starchy food	16.5% (34)				
Category 1.1	Dry or instant cereals/starch	16.5% (34)				
	Category 2: Soft-wet spoonable. Ready-to-eat foods. Typically smooth or semi-puréed packaged in jars or pouches and can be spoon-fed					
Category 2.1	Dairy-based desserts and cereal products	1.5% (3)				
Category 2.2	Fruit purée with or without addition of vegetables, cereals, or milk	12.1% (25)				
Category 2.3	Vegetable only purée	1.5% (3)				
Category 2.4	Puréed vegetables and cereals	1.9% (4)				
Category 2.5	Puréed meal with cheese (but not meat or fish) mentioned in the name	0.5% (1)				
Category 2.6	Puréed meal with meat or fish mentioned as first food in product name	5.8% (12)				
Category 2.7	Puréed meals with meat or fish (but not named first in product name)	3.4% (7)				
Category 2.8	Purées with only meat, fish or cheese in the name	0.0% (0)				
Category 3: Meals wir young children	th chunky pieces. Often sold in trays or pots for older infants and	3.9% (8)				
Category 3.1	Meat, fish, or cheese-based meal with chunky pieces	3.9% (8)				
Category 3.2	Vegetable-based meal with chunky pieces	0.0% (0)				
Category 4: Dry finge	r foods and snacks	42.2% (87)				
Category 4.1	Confectionery, sweet spreads and fruit chews	1.0% (2)				
Category 4.2	Fruit (fresh or dry whole fruit or pieces)	2.4% (5)				
Category 4.3	Other snacks and finger foods	38.8% (80)				
Category 5: Juices an	d other drinks	0.0% (0)				
Category 5.1	Single or mixed fruit juices, vegetable juices, or other non-formula drinks	0.0% (0)				
Category 5.2	Cow's milk and milk alternatives with added sugar or sweetening agent	0.0% (0)				
Category 6: Other		10.7% (22)				
Category 6.1	Other	10.7% (22)				
	Total unique CPCF	100.0% (206)				

Annex 2. Labeling requirements on breastfeeding per company

Company	Number of products	% Products meeting all relevant labeling requirements on breastfeeding	% Products with minimum recommended age of introduction of at least 6 months	% Products not marketed as suitable for <6m	% Products with a message on importance of breastfeeding ≥2y	% Products that do not suggest superiority or equivalence to breastmilk	% Products that do not recommend or promote bottle feeding
Albatross CoLtd.	5	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Belfood	4	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Berli Jucker Foods Ltd.	6	0.0%	66.7%	83.3%	0.0%	100.0%	100.0%
Doctor Rice	1	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Goodfriends Food Innotech CoLtd.	3	0.0%	0.0%	100.0%	33.3%	100.0%	100.0%
Green One Food company	9	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%
Greenday Global CoLtd.	2	0.0%	50.0%	100.0%	0.0%	100.0%	100.0%
Healthy Foods CoLtd.	15	0.0%	20.0%	100.0%	0.0%	100.0%	100.0%
Hero Group	3	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Homey (Thailand) CoLtd.	1	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%
Ilamoon CoLtd.	9	0.0%	77.8%	100.0%	0.0%	100.0%	100.0%
Ispoon	1	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%
Kraft Heinz Co	10	0.0%	90.0%	100.0%	0.0%	100.0%	100.0%
Mama Cooks (Thailand) CoLtd.	5	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Namchow (Thailand) Ltd.	7	0.0%	28.6%	100.0%	0.0%	100.0%	100.0%
Natural Health Foods Company Ltd.	14	0.0%	50.0%	100.0%	0.0%	92.9%	100.0%
Nestlé	9	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Nutri-Five Food CoLtd.	2	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%
Octa Foods Company Ltd.	11	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Only Organic	5	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
P.Pattanachot Limited Partnership	1	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Peachy Village CoLtd.	25	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Pyeongdong-ro	3	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%
Sahapan Century CoLtd.	9	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Summer Sky CoLtd.	6	0.0%	33.3%	100.0%	0.0%	100.0%	100.0%
T.Man Pharma CoLtd.	1	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Variety Foods International CoLtd.	2	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Xongdur Thai Organic Food CoLtd.	11	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Zen Kitchen Foods	2	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Total products that meet labeling requirements on breastfeeding	182	0.0% (0)	70.9% (129)	99.5% (181)	0.5% (1)	99.5% (181)	100.0% (182)



Annex 3. Labeling requirements on claims per company

Company	Number of products	% Products meeting all relevant labeling requirements on claims	% Products without non- permitted compositional claims	% Products with no nutrient content claims	% Products with no nutrient function claims	% Products with no disease risk reduction claims	% Products with no other claims
Albatross CoLtd.	5	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%
Belfood	4	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%
Berli Jucker Foods Ltd.	6	0.0%	50.0%	66.7%	83.3%	100.0%	0.0%
Doctor Rice	1	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Goodfriends Food Innotech CoLtd.	3	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%
Green One Food company	9	22.2%	66.7%	100.0%	100.0%	100.0%	44.4%
Greenday Global CoLtd.	2	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Healthy Foods CoLtd.	15	0.0%	0.0%	26.7%	53.3%	100.0%	0.0%
Hero Group	3	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Homey (Thailand) CoLtd.	1	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Ilamoon CoLtd.	9	0.0%	0.0%	66.7%	100.0%	100.0%	0.0%
Ispoon	1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Kraft Heinz Co	10	60.0%	90.0%	90.0%	100.0%	100.0%	60.0%
Mama Cooks (Thailand) CoLtd.	5	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%
Namchow (Thailand) Ltd.	7	0.0%	0.0%	71.4%	100.0%	100.0%	0.0%
Natural Health Foods Company Ltd.	14	0.0%	0.0%	71.4%	100.0%	100.0%	0.0%
Nestlé	9	0.0%	88.9%	0.0%	0.0%	100.0%	0.0%
Nutri-Five Food CoLtd.	2	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Octa Foods Company Ltd.	11	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Only Organic	5	0.0%	60.0%	100.0%	100.0%	100.0%	0.0%
P.Pattanachot Limited Partnership	1	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Peachy Village CoLtd.	25	0.0%	4.0%	84.0%	100.0%	100.0%	0.0%
Pyeongdong-ro	3	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Sahapan Century CoLtd.	9	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Summer Sky CoLtd.	6	0.0%	16.7 %	83.3%	100.0%	100.0%	0.0%
T.Man Pharma CoLtd.	1	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Variety Foods International CoLtd.	2	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%
Xongdur Thai Organic Food CoLtd.	11	0.0%	0.0%	0.0%	36.4%	100.0%	27.3%
Zen Kitchen Foods	2	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%
Total products that meet labeling requirements on claims	182	6.6% (12)	20.3% (37)	65.4% (119)	84.1% (153)	100.0% (182)	14.8% (27)

Annex 4. Product name and ingredient list clarity*

Company	Number of products	% Products meeting all relevant labeling requirements on ingredient lists	% Products where product name reflects ingredients in descending order as per ingredient list	% Products with % of fruit stated on ingredient list	% Products with % of added water stated on ingredient list	% Products with % of protein stated on ingredient list
Albatross CoLtd.	5	20.0%	20.0%	100.0% (4)	100.0% (5)	100.0% (3)
Belfood	4	0.0%	0.0%	100.0% (4)	-	-
Berli Jucker Foods Ltd.	6	16.7%	16.7%	100.0% (4)	-	
Doctor Rice	1	0.0%	0.0%	100.0% (1)	-	-
Goodfriends Food Innotech CoLtd.	3	0.0%	0.0%	-	-	-
Green One Food company	9	0.0%	0.0%	100.0% (1)	-	-
Greenday Global CoLtd.	2	0.0%	0.0%	100.0% (1)	-	5 .
Healthy Foods CoLtd.	15	0.0%	0.0%	100.0% (10)	-	-
Hero Group	3	0.0%	0.0%	100.0% (3)	-	190
Homey (Thailand) CoLtd.	1	0.0%	0.0%	100.0% (1)	-	-
llamoon CoLtd.	9	33.3%	33.3%	100.0% (8)	-	-
Ispoon	1	0.0%	0.0%	100.0% (1)	-	-
Kraft Heinz Co	10	0.0%	0.0%	100.0% (7)	100.0% (1)	
Mama Cooks (Thailand) CoLtd.	5	0.0%	0.0%	100.0% (1)	-	-
Namchow (Thailand) Ltd.	7	14.3%	14.3%	100.0% (6)	-	-
Natural Health Foods Company Ltd.	14	64.3%	64.3%	100.0% (9)	-	-
Nestlé	9	55.6%	55.6%	100.0% (6)	-	-
Nutri-Five Food CoLtd.	2	0.0%	0.0%	100.0% (2)	-	-
Octa Foods Company Ltd.	11	54.5%	54.5%	100.0% (6)	100.0% (8)	100.0% (8)
Only Organic	5	60.0%	60.0%	100.0% (5)	100.0% (4)	-
P.Pattanachot Limited Partnership	1	0.0%	0.0%	-	-	2 .
Peachy Village CoLtd.	25	36.0%	52.0%	95.8% (23)	69.2% (9)	100.0% (5)
Pyeongdong-ro	3	0.0%	0.0%	100.0% (2)	-	-
Sahapan Century CoLtd.	9	44.4%	44.4%	100.0% (3)	100.0% (9)	100.0% (9)
Summer Sky CoLtd.	6	66.7%	66.7%	100.0% (4)	-	
T.Man Pharma CoLtd.	1	0.0%	0.0%	100.0% (1)		-
Variety Foods International CoLtd.	2	0.0%	0.0%	100.0% (2)		
Xongdur Thai Organic Food CoLtd.	11	45.5%	45.5%	100.0% (6)	-	-
Zen Kitchen Foods	2	50.0%	50.0%	-	100.0% (2)	100.0% (2)
Total products that meet all labeling requirements on product name and ingredient list clarity	182	28.6% (52)	30.8% (56)	99.2% (121)	90.5% (38)	100.0% (27)
	lucts applicable ed requirement	182	182	122	42	27

1 = All products excluding category 2.3 products were assessed against this question.

 $2{=}$ All products excluding category 1 and 4 products were assessed against this question.

3= Only categories 2.6, 2.7, and 3 products were assessed against this standard.

*Where no value is presented, the '-' indicates that the NPM requirement was not applicable to the company's CPCF product type(s).

Annex 5. Messages on blended/puréed products and products with spouts*

Company	Number of blended/puréed products	% Products with maximum recommended age of use of 12 months 1	Number of products with spouts	% Products with spout stating not to suck from the container ²	% Products with spout warning that cap is a choking hazard ²
Albatross CoLtd.	5	0.0%	-	-	-
Belfood	4	0.0%	-	-	-
Kraft Heinz Co	9	0.0%	-	-	-
Octa Foods Company Ltd.	8	0.0%	-	-	-
Only Organic	5	0.0%	5	0.0%	100.0%
Peachy Village CoLtd.	17	0.0%	17	100.0%	23.5%
Sahapan Century CoLtd.	4	0.0%	-	-	-
Summer Sky CoLtd.	1	0.0%	1	100.0%	100.0%
Zen Kitchen Foods	2	0.0%	2	0.0%	0.0%
Total products that meet applicable labeling requirements	55	0.0% (0)	25	72.0% (18)	40.0% (10)

*Note where no value is presented, the '-'indicates that the NPM requirement was not applicable to the company's CPCF product type(s). ¹Only category 2 products (n=55) were assessed against this requirement. ²Only category 2 products with spouts (n=25) were assessed against these criteria.

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