Sanitation standard for food utensils, containers and packages

Article 1

This Standard is prescribed in accordance with the provisions of Article 17 of the Act Governing Food Safety and Sanitation.

Article 2

Plastic food containers and packages shall not be recycled to repackage food then sell.

Article 3

Food utensils, containers and packages shall not have discoloration, off odor and flavor, contamination, moulds, foreign matter or stripped fiber.

Article 4

The food utensils and containers which use for children under the age of three, shall not add di-(2-ethylhexyl) phthalate (DEHP), Di-n-octyl phthalate (DNOP), dibutyl phthalate (DBP) and Benzyl butyl phthalate (BBP).

Article 5

Plastic infant feeding bottles shall not contain of Bisphenol A.

Article 6

Food utensils, containers and packages shall meet the requirements according to the following standard tests :

- 1. General requirements as Appendix table 1.
- 2. The plastic materials listed in the Appendix table 2, shall also comply with the Appendix table 1.
- The containers and packages for dairy products shall comply with the Appendix table
 3.

Article 7

This Standard shall be implemented from the date of promulgation.

Appendix table 1. General requirements

Itom and	Matanial tast itam and		Migrat	tion test	
row motorials	material test item and	Solvent ⁽¹⁾	Migration	Item and passing	Note
raw materials	passing standard	Solvent	condition	standard	
Utensils	The materials and				
	construction shall not				
	have the risk of				
	coming-off of copper,				
	lead or their alloys.				
Utensils,	The materials shall				
containers and	have their				
packages	characteristic gloss				
made of	and be not rusting.				
copper or	Those parts which are				
copper alloy	in direct contact with				
	food contents shall be				
	completely coated				
	with tin or silver, or				
	subjected to				
	appropriate treatment,				
	which is not causing				
	health hazards.				
Tin for	Lead: Not more than				
coating	5%				
Solder	Lead: Not more than				
materials for	20% Solder materials				
manufacturing	for use on the outside				
and patching-	of empty cans shall				
up utensils,	meet the following				
containers and	requirements :				
packages	Double-seam cans:				
	Lead, not more than				
	98%;				
	Non-double-seam				
	cans: Lead, not				
	more than 60%.				
Utensils,	Coloring agents shall				
containers and	meet the regulations				
packages	set in the Scope and				
	Application Standard				
	of Food Additives,				
	except those coloring				
	agents which have no				
	risk of migration into				
	the foods.				
Glass,		4% Acetic	Room	Lead: Not more than 5	
porcelain, and		acid	temperature	ppm.	
enameled			(dark place)	Cadmium: Not more	
utensils or			for 24 hours	than 0.5 ppm.	
containers;					
(a)More than					

2.5 cm in					
depth but not					
more than 1.1					
L of its					
capacity.					
Glass,		4% Acetic	Room	Lead: Not more than	
porcelain, and		acid	temperature	2.5 ppm.	
enameled			(dark place)	Cadmium: Not more	
utensils or			for 24 hours	than 0.25 ppm.	
containers;					
(b)More than					
2.5 cm in					
depth and					
more than 1.1					
L of its					
capacity.					
Glass,		4% Acetic	Room	Lead: Not more than	
porcelain, and		acid	temperature	$17\mu g/cm^2$.	
enameled			(dark place)	Cadmium: Not more	
utensils or			for 24 hours	than $1.7\mu g/cm^2$.	
containers;					
(c)Not more					
than 2.5 cm in					
depth or					
unable to be					
filled up with					
liquid.					
Metal alloy-	Lead: Not more than	Water	60°C for 30	Arsenic: Not more than	
the direct	0.1%.		min ⁽²⁾	0.2 ppm.	
contact	Antimony: Not more			Lead: Not more than	
surface	than 5%.			0.4 ppm.	
material with				Cadmium: Not more	
food is metal				than 0.1 ppm.	
alloy.		0.5%	60°C for 30	Arsenic: Not more than	
		Citric	min	0.2 ppm.	
		acid		Lead: Not more than	
		solution		0.4 ppm.	
				Cadmium: Not more	
				than 0.1 ppm.	
		n-Heptane	25°C for 1	Residues after	Applied to the
			hour	evaporation: Not more	metal cans for
				than 90 ppm.	foods with
					natural fats
					and oils as the
					major raw
					material and
					the inner side
					coated with a
					coating
					material
					containing
					more than

					3% of zinc
					oxide.
Metal alloy- the direct contact surface material with food is synthetic resins.		Water	60°C for 30 min ⁽²⁾	Phenol: Not more than 5 ppm. Formaldehyde: Negative. Residues after evaporation: Not more than 30 ppm. When the residue exceeds 30 ppm, the chloroform- soluble extracts shall not be more than 30 ppm.	oxide.
		4%Acetic acid	60°C for 30 min ⁽²⁾	Residues after evaporation: Not more than 30 ppm	
		20% Ethanol	60°C for 30 min	Residues after evaporation: Not more than 30 ppm.	
		n-Pentane	25°C for 1 hours	Epichlorohydrin monomer: Not more than 0.5 ppm.	
		Ethanol (99.5%)	Below 5°C for 24 hours	Vinyl chloride monomer: Not more than 0.05 ppm.	
Electrode for utensils (with devices to directly transmit electric current into foods)	The electrode shall be made only of iron, aluminum, platinum and titanium. (Stainless steel can also be used if the electric current transmitted to foods is minimal.)				
Plastics	Lead: Not more than 100 ppm. Cadmium: Not more than 100 ppm. Plasticizer ⁽³⁾ : DEHP, DBP, BBP, DIDP, DINP, DMP,	Water 4% Acetic acid	60°C for 30 min ⁽²⁾ 60°C for 30 min ⁽²⁾	Consumption of potassium permanganate : Not more than 10 ppm. Heavy metals: Not more than 1 ppm (as Pb).	1.Besides the above general requirement s, plastic utensils containers

	DNOP and DEP,	n-Heptane	25°C for 1	Plasticizer ⁽³⁾ :	and
	individual content	-	hr	DEHP: Not more than	packages
	shall not exceed			1.5 ppm.	shall also
	0.1%. (by mass)			DBP: Not more than 0.3	meet the
				ppm.	requirement
				BBP: Not more than 30	s for plastic
				ppm.	materials
				DIDP: Not more than 9	listed in the
				ppm.	Appendix
				DINP: Not more than 9	table 2.
				ppm.	2. The
				DEHA: Not more than	standard of
				18 ppm.	phthalates in
					the material
					test, not
					applicable
					for PVC
					materials.
Paper ⁽⁴⁾ -	Fluorescent	Water	60°C for 30	Arsenic: Not more than	
the direct	brightening agent :		min ⁽²⁾	0.1 ppm (as As ₂ O ₃);	
contact	Negative			Formaldehyde:	
surface	6			Negative;	
material with				Residues after	
food is wax or				evaporation: Not more	
pulp product				than 30 ppm. When	
				the residue exceeds 30	
				ppm, the chloroform-	
				soluble extracts shall	
				not be more than 40	
				ppm.	
		4% Acetic	60°C for 30	Arsenic: Not more than	
		acid	$\min^{(2)}$	$0.1 \text{ ppm} (as As_2O_3);$	
				Heavy metals: Not	
				more than 1 ppm (as	
				Pb);	
				Residues after	
				evaporation: Not more	
				than 30 ppm. When	
				the residue exceeds 30	
				ppm, the chloroform-	
				soluble extracts shall	
				not be more than 40	
			259C for 1	ppm.	
		n-Heptane	25°C Ior I	Kesidues after	
			nour	than 20 mm Whan	
				the residue exceeds 20	
				nom the chloroform	
				ppin, me chioroiorin-	
				not be more than 10	
				not be more than 40	
	1	1	1	hhm.	

		20%	60°C for 30	Residues after	
		Ethanol	min.	evaporation: Not more	
				than 30 ppm. When the	
				residue exceeds 30	
				ppm, the chloroform-	
				soluble extracts shall	
				not be more than 40	
				ppm.	
Paper ⁽⁴⁾ -				•••	
the direct					
contact					
surface					
material with					
food is plant					
fiber					
Paper ⁽⁴⁾ -		Shall meet	the requirem	ents set for plastics.	
the direct		1. When us	se the raw ma	terial which listed in the	
contact		Append	ix table 2, sha	all comply with the	
surface		requiren	nents in the ta	able 2.	
material with		2.The plas	tic material e	xcept the mentioned	
food is		earlier, t	he migration	test standard shall apply	
plastics		the "Met	tal alloy- the	direct contact surface	
-		material	with food is	synthetic resins".	
(1) The simula	tion objects of each sol	lvent are de	escribed as fo	llows (glass porcelain ar	d enameled

(1) The simulation objects of each solvent are described as follows (glass, porcelain, and enameled utensils or containers project not applicable):

a. Water: simulate the contact with foods containing PH>5.

b. 4% Acetic acid, 0.5% Citric acid solution: simulate the contact with foods containing PH \leq 5.

c. n-Heptane: simulate the contact with foods containing surface oils or oils and fatty foods.

d. 20% Ethanol: simulate contact foods containing alcohol.

- (2) The products which are heated to higher than 100°C during food processing or cooking, the migration condition shall set 95°C for 30 min.
- (3) Abbreviation table of plasticizers:

Abbreviations	English name
DEHP	Di(2-ethylhexyl)phthalate
DBP	Dibutyl phthalate
BBP	Benzyl butyl phthalate
DIDP	Di-isodecyl phthalate
DINP	Di-isononyl phthalate
DMP	Dimethyl phthalate
DNOP	Di-n-octyl phthalate
DEP	Diethyl phthalate
DEHA	Di-2-ethylhexyl Adipate

(4) Remark for paper:

- a. This standard applies to the containers such as meal boxes, plates, dishes, bowls and cups, which is mainly made of paper pulp or the fiber of agricultural materials such as wood, sugar cane, reed, hemp, straw, haulm, hull of paddy, bamboo, etc. the weight for physically detachable plastics, or other metal foil shall be less than 10% of the overall weight.
- b. Paper containers for dairy products shall meet the standards of 'Requirements for the containers and packages for dairy products' described below.
- c. Additives : only allowed for those substances generally recognized as safe.
- d. Requirement of papers: the raw materials shall be well packaged and stored under good

condition. Waste paper shall not be used. The shelf life for normal run and side trim paper shall be maintained within 24 months and 6 months, respectively.

- e. Recycled materials shall not be used. Paper used shall only be made form virgin materials. The materials from bamboo and wood containing harmful substances shall not be used.
- f. If the contact surface of paper product is not completely covered by plastic (including synthetic resin), it should be classified according to its material as wax, pulp product or plant fiber whose internal material is in direct contact with the content.

	I	1			
Raw	Material test item and		Migra	ation test	
materials	passing standard	Solvent ⁽¹⁾	Migration condition	Item and passing standard	Note
Polyvinyl chloride [PVC]	Lead: Not more than 100 ppm. Cadmium: Not more than 100 ppm. Dibutyltin: Not more	Water	60°C for 30 min ⁽²⁾	Consumption of potassium permanganate: Not more than 10 ppm. Residues after evaporation: Not more than 30 ppm.	
	than 50 ppm (as dibutyltin dichloride) Cresyl phosphate: Not more than 1000	4 % Acetic acid	60°C for 30 min ⁽²⁾	Heavy metals: Not more than 1 ppm (as Pb); Residues after evaporation: Not more than 30 ppm.	
	 ppm. Vinyl chloride monomer: Not more than 1 ppm. Plasticizer ⁽³⁾: Sum of the DEHP. 	n-Heptane	25°C for 1 hour.	Residues after evaporation: Not more than 150 ppm.	
	DBP, BBP, DIDP, DINP, DMP, DNOP and DEP, shall not exceed 0.1%. (by mass)	20 % Ethanol	60°C for 30 min.	Residues after evaporation: Not more than 30 ppm.	
Polyvinylid ene dichloride [PVDC]	Lead: Not more than 100 ppm. Cadmium: Not more than 100 ppm. Barium: Not more	Water	60°C for 30 min ⁽²⁾	Consumption of potassium permanganate: Not more than 10 ppm. Residues after evaporation: Not more than 30 ppm.	
	than 100 ppm. Vinylidene-dichloride monomer: Not more than 6 ppm.	4%Acetic acid	60°C for 30 min ⁽²⁾	Heavy metals: Not more than 1 ppm (as Pb); Residues after evaporation: Not more than 30 ppm.	
		n-Heptane	25°C for 1 hour.	Residues after evaporation: Not more than 30 ppm.	
		20 % Ethanol	60°C for 30 min.	Residues after evaporation: Not more than 30 ppm.	
Polyethylen e [PE] and polypropyle ne [PP]	Lead: Not more than 100 ppm. Cadmium: Not more than 100 ppm.	Water	60°C for 30 min ⁽²⁾	Consumption of potassium permanganate: Not more than 10 ppm. Residues after evaporation: Not more than 30 ppm.	
		4%Acetic acid	60°C for 30 min ⁽²⁾	Heavy metals: Not more than 1 ppm (as Pb); Residues after evaporation: Not more than 30 ppm.	

Appendix table 2. Requirements for plastic materials

		n-Heptane	25°C for 1	Residues after evaporation:	
		1	hour	Not more than 30 ppm,	
				150 ppm for those	
				products which are heated	
				to not higher than 100°C	
				during food processing	
				and cooking	
		20 %	60°C for 30	Residues after evanoration:	
		Ethanol	min	Not more than 30 ppm	
Polystyrene	Lead: Not more than	Water	60° C for 30	Consumption of potassium	Tableware
	100 nnm	water	$min^{(2)}$	normanganata: Nat mora	made of
	Codmiumi Not more			then 10 mm	
	then 100 mm			unan to ppin.	porystyrene
	V_{2} than 100 ppm.			Net use then 20 mm	are not
	volatile compounds			Not more than 30 ppm.	suitable for
	(the sum of styrene,	4% Acetic	60°C for 30	Heavy metals: Not more	filling foods
	toluene, etnyl	acid	$\min^{(2)}$	than 1 ppm (as Pb);	ata
	benzene, n-propyl			Residues after evaporation:	temperature
	benzene, and			Not more than 30 ppm.	higher than
	isopropyl benzene):				100°C.
	Not more than 5000	n-Heptane	25°C for 1	Residues after evaporation:	
	ppm. Foaming	n mepuane	hour	Not more than 240 ppm.	
	polystyrene shall be		110 011		
	not more than 2000				
	ppm, among which				
	styrene and ethyl	20 %	60°C for 30	Residues after evanoration:	
	benzene shall not	Ethanol	min	Not more than 30 ppm	
	be more than 1000	L'indrioi	111111.	Not more than 50 ppm.	
	ppm respectively.				
Polv(ethyle	Lead: Not more than	Water	60°C for 30	Consumption of potassium	
ne	100 ppm	() alor	$\min^{(2)}$	permanganate: Not more	
terenhthalat	Cadmium: Not more		11111	than 10 ppm	
e)	than 100 nnm			Residues after evanoration:	
(PET)	than 100 ppin.			Not more than 30 ppm	
		4% Acetic	60°C for 30	Heavy metals: Not more	
		acid	$min^{(2)}$	than 1 ppm (as Pb):	
				Antimony: Not more than	
				0.05 ppm.	
				Germanium: Not more than	
				0.1 ppm.	
				Residues after evaporation:	
				Not more than 30 ppm.	
		n-Heptane	25°C for 1	Residues after evaporation:	
			hour	Not more than 30 ppm.	
		20 %	60°C for 30	Residues after evaporation:	
		Ethanol	min	Not more than 30 ppm.	
Plastics	Lead: Not more than	Water	60° C for 30	Phenol: Negative	
with	100 ppm.		min ⁽²⁾	Formaldehyde: Negative.	

formaldehy	Cadmium: Not more	4% Acetic	60°C for 30	Residues after evaporation:	
de as raw	than 100 ppm.	acid	$min^{(2)}$	Not more than 30 ppm.	
material for					
synthesis					
Plastics with	Lead: Not more than	Water	60°C for 30	Phenol: Negative.	
formaldehy	100 ppm.		$min^{(2)}$	Formaldehyde: Negative.	
de-	Cadmium: Not more	4% Acetic	60°C for 30	Residues after evaporation:	
melamine as	than 100 ppm.	acid	$min^{(2)}$	Not more than 30 ppm.	
raw material		4% Acetic	95°C for 30	Melamine: Not more than	
for synthesis		acid	min	2.5 ppm.	
Poly	Lead: Not more than	Water	60°C for 30	Consumption of potassium	
(methyl	100 ppm.		$min^{(2)}$	permanganate: Not more	
methacrylat	Cadmium: Not more			than 10 ppm.	
e)	than 100 ppm.			Residues after evaporation:	
[PMMA]				Not more than 30 ppm.	
		4% Acetic	60°C for 30	Heavy metals: Not more	
		acid	$min^{(2)}$	than 1 ppm (as Pb);	
				Residues after evaporation:	
				Not more than 30 ppm.	
		n-Heptane	25°C for 1	Residues after evaporation:	
			hour	Not more than 30 ppm.	
		20 %	60°C for 30	Residues after evaporation:	
		Ethanol	min	Not more than 30 ppm.	
				Methyl-methacrylate	
				monomer: Not more than	
				15 ppm.	
Polyamide	Lead: Not more than	Water	60°C for 30	Consumption of potassium	
[PA, Nylon]	100 ppm.		$min^{(2)}$	permanganate: Not more	
	Cadmium: Not more			than 10 ppm.	
	than 100 ppm.			Residues after evaporation:	
				Not more than 30 ppm.	
		4% Acetic	60°C for 30	Heavy metals: Not more	
		acid	$\min^{(2)}$	than 1 ppm (as Pb);	
				Residues after evaporation:	
				Not more than 30 ppm.	
		n-Heptane	25°C for 1	Residues after evaporation:	
			hour	Not more than 30 ppm.	
		20 %	60°C for 30	Residues after evaporation:	
		Ethanol	mın	Not more than 30 ppm.	
				Caprolactam monomer: Not	
D 1 .1 1	T 1 XT / 1	XX 7 /		more than 15 ppm.	
Polymethyl	Lead: Not more than	Water	$60^{\circ}C$ for 30	Consumption of potassium	
pentene	100 ppm.		min	permanganate: Not more	
[PMP]	Cadmium: Not more			than 10 ppm.	
	than 100 ppm.			Residues after evaporation:	
		<u> 10/ A</u>	(0)() () ()	Not more than 30 ppm.	
		4% Acetic	00° tor 30	Heavy metals: Not more	
		acid	min	unan 1 ppm (as Pb);	
				Residues after evaporation:	
1		1		Not more than 30 ppm.	

		n-Heptane	25°C for 1	Residues after evaporation:	
		-	hour	Not more than 120 ppm.	
		20 %	60°C for 30	Residues after evaporation:	
		Ethanol	min.	Not more than 30 ppm.	
Rubber-	Lead: Not more than	Water	60°C for 30	Phenol: Nor more than 5	
except milk	100 ppm.		$min^{(2)}$	ppm.	
feeders for	Cadmium: Not more			Formaldehyde: Negative.	
babies	than 100 ppm.			Residues after evaporation:	
	2-Mercaptoimidazoli			Not more than 60 ppm.	
	ne: Negative.	4% Acetic	60°C for 30	zinc: Not more than 15 ppm.	
	C	acid	$min^{(2)}$	Heavy metals: Not more	
				than 1 ppm (as Pb)	
		20 %	60°C for 30	Residues after evaporation:	
		Ethanol	min	Not more than 60 ppm.	
Rubber-	Lead: Not more than	Water	40°C for 24	Phenol: Nor more than 5	
milk feeders	100 ppm.		hours	ppm.	
for babies	Cadmium: Not more			Formaldehvde: Negative.	
	than 100 ppm.			Residues after evaporation:	
	unui 100 ppini			Not more than 40 ppm.	
				zinc: Not more than 1 ppm.	
		4% Acetic	40°C for 24	Heavy metals: Not more	
		acid	hours	than 1 ppm (as Pb)	
Polycarbona	Lead: Not more than	Water	95°C for 30	Consumption of potassium	
te	100 ppm	() alor	min	permanganate: Not more	
[PC]	Cadmium: Not more		111111	than 10 ppm.	
	than 100 ppm.			Residues after evaporation:	
	unui 100 pp			Not more than 30 ppm.	
				Bisphenol A (except feeding	
				bottle): Not more than 0.6	
				npm	
				pp	
		4% Acetic	60°C for 30	Heavy metals: Not more	
		acıd	min	than I ppm (as Pb);	
				Residues after evaporation:	
				Not more than 30 ppm.	
				Bisphenol A (except feeding	
				bottle): Not more than 0.6	
D 1 1 1		XX7 4	05°0 (20	ppm.	
Polyphenyl	Lead: Not more than	Water	95 C for 30	Consumption of potassium	
sulione	100 ppm.		mın	permanganate: Not more	
[PPSU]-	Cadmium: Not more			than 10 ppm.	
leeding	than 100 ppm.			Network then 20 mm	
bottle		40/ 4	(0°C C 20	Not more than 30 ppm.	
		4% Acetic	60 C for 30	Heavy metals: Not more	
		acid	min	than I ppm (as Pb);	
				Residues after evaporation:	
D 1 1 1	T 1 XT	XX 7 /		Not more than 30 ppm.	
Polyethersul	Lead: Not more than	Water	95°C for 30	Consumption of potassium	
tone [PES]-	100 ppm.		min	permanganate: Not more	
teeding	Cadmium: Not more			than 10 ppm.	
bottle	than 100 ppm.			Residues after evaporation:	
				Not more than 30 ppm.	

		4% Acetic acid	60°C for 30 min	Heavy metals: Not more than 1 ppm (as Pb); Residues after evaporation: Not more than 30 ppm.	
Polylactic acid [PLA]	Lead: Not more than 100 ppm. Cadmium: Not more than 100 ppm.	Water 4% Acetic acid 20 %	50°C for 4 hr (60°C for 30 min for those products which are heated to higher than 50°C during food processing or cooking, or use the composite	Consumption of potassium permanganate: Not more than 10 ppm. Residues after evaporation: Not more than 30 ppm. Total of lactic acid: Not more than 30 ppm. Heavy metals: Not more than 1 ppm (as Pb); Residues after evaporation: Not more than 30 ppm. Residues after evaporation:	Food utensils, containers and packages made of polylactic acid are not used for high temperature sterilization during food processing
		n-Heptane	PLA.) 25°C for 1 hour	Not more than 30 ppm. Residues after evaporation: Not more than 30 ppm.	or cooking and are not suitable for filling foods at a temperature higher than $100^{\circ}C$.

(1) The simulation objects of each solvent are described as follow:

a. Water: simulate the contact with foods containing PH>5.

b. 4% Acetic acid: simulate the contact with foods containing PH \leq 5.

c. n-Heptane: simulate the contact with foods containing surface oils or oils and fatty foods.

d. 20% Ethanol: simulate contact foods containing alcohol.

(2) The products which are heated to higher than 100°C during food processing or cooking, the migration condition shall set 95°C for 30 min.

(3) Abbreviation table of plasticizers:

Abbreviations	English name
DEHP	Di(2-ethylhexyl) phthalate
DBP	Dibutyl phthalate
BBP	Benzyl butyl phthalate
DIDP	Di-isodecyl phthalate
DINP	Di-isononyl phthalate
DMP	Dimethyl phthalate
DNOP	Di-n-octyl phthalate
DEP	Diethyl phthalate

Itom and	Material test item	Migration teat			Passing standard for special
raw materials	and passing	Solvent	Migration	Item and passing	tests
	standard	Solvent	condition	standard	
Containers and packages made of polyethylene or polyethylene- processed paper for dairy products ^{(1,}	n-Hexane extract: Not more than 2.6%. Xylene soluble: Not more than 11.3%. Arsenic: Not more than 2	Water	60°C for 30 min	Consumption of potassium permanganate: Not more than 5 ppm. Residues after	Breaking force test: Not lower than 2.0 kgf/cm ² for those containing not more than 300 mL food contents. (Not lower than 4.0 kgf/cm ² for those which can be preserved under room temperature.)
exclude cream and butter) (2)	ppm (as As ₂ O ₃) Heavy metals: Not more than 20 ppm (as Pb)	Acetic acid	30 min	evaporation: Not more than 15 ppm. Heavy metals: Not more than 1 ppm (as Pb)	Not lower than 5.0 kgf/cm ² for those containing more than 300 mL (including 300 mL) food contents. (Not lower than 8.0 kgf/cm ² for those which can be preserved under room temperature.) Sealing strength test: Shall not have damage or gas leakage. Pin-hole test: No methyl blue spot shall be found on the filter paper. Materials for the containers or packages of products which can be preserved under room temperature, shall be impermeable to both light and gas.
Containers and packages made of polyethylene or polyethylene-	n-Hexane extract: Not more than 2.6%. Xylene soluble: Not more than	Water	60°C for 30 min	Consumption of potassium permanganate: Not more than 5 ppm.	Breaking force test: The same as those for dairy products. Sealing strength test: The same as those for dairy products.
for cream and butter ⁽²⁾	Arsenic: Not more than 2 ppm (as As_2O_3) Heavy metals: Not more than 20 ppm (as Pb)	4% Acetic acid	30 min	more than 1 ppm (as Pb)	those for dairy products.
		n- Heptane	25°C for 1 hour	Residues after evaporation: Not more than 15 ppm.	
Glass bottles	Shall meet the requ	uirements	for glass b	ottles under the	
for dairy	category of Appen	dix table	1 as describ	bed above, and shall	
products (1)	be transparent.				

Appendix table 3. Materials requirements for dairy products

Metal cans for	The surface in	Water	60°C for	The surface in	
dairy products	direct contact	vv ater	30 min	direct contact with	
(1)	with food is		50 11111	food is plastic.	
	nlastic.			Consumption of	
	Arsenic: Not			notassium	
	more than 2			potassium permanganate:	
	none than 2			Not more than 5	
	$\Delta s_2 O_2$			not more than 5	
	Cadmium: Not			Phenol: Negative	
	more then 100			Formaldohydo:	
	nnm			Nogativo	
	I ead: Not more	10/	60°C for	Argonio: Not more	
	than 100 nnm	4/0 A potio	30 min	then 0.1 mm (ag	
	If the surface in	Acetic	50 11111		
	direct contact	aciu		AS_2O_3	
	with food is			Heavy metals: Not	
	with food is			more than I ppm	
	chloride it shall			(as Pb)	
	additionally most				
	the following			The surface in	
	requirements:			direct contact with	
	Dibutyltin: Not			food is plastic:	
	more than 50			Residues after	
	nnm (as			evaporation: not	
	dibutyltin			more than 15	
	diablarida			ppm.	
	Crosv1				
	rhogrhoto				
	Not more then				
	Vinyl chlorido				
	vinyi chioride				
	monother. Not				
Cantainana 1	ppm.	· · · ·	41.	6	Cooling strength to st. The
Containers and	Shall meet the san	ie require	ements as the	lose for containers	Sealing strength test: The
packages made	and packages mad	e of poly	ethylene for	r dairy products.	same as those for dairy
01					Dia hala tast. The same as
polyethylene-					these for doing meduate
processed paper					those for dairy products.
noi le la stie said					then 5.0 haf/am ²
hastoria					than 5.0 kgi/chi .
bacteria					
mille containing					
heverages					
(sould with					
(sealed with					
plastic-					
processed					
aluminum					
to1l).					

Containers and packages made of polystyrene for fermented milk, lactic acid bacteria beverages, and milk-containing beverages (sealed with plastic- processed aluminum foil). Composite containers and packages for fermented milk, lactic acid bacteria beverages, and	Volatile compounds (the sum of styrene, toluene, ethyl benzene, isopropyl- benzene, and n- propyl benzene): Not more than 1500 ppm. Arsenic: Not more than 2 ppm (As ₂ O ₃) Heavy metals: Not more than 20 ppm (as Pb) Metals parts shall 1 for "Metal alloy" processed paper, a foil shall meet the materials as descri	Water 4% Acetic acid meet the ". Synther nd synther requirem bed befor	60°C for 30 min 60°C for 30 min requirementic resin, sy etic-resin-prients set for re.	Consumption of potassium permanganate: Not more than 5 ppm. Residues after evaporation: Not more than 15 ppm. Heavy metals: Not more than 1 ppm (as Pb) ts as Appendix table nthetic-resin- rocessed aluminum the respective	Sealing strength test: The same as those for dairy products. Pin-hole test: The same as those for dairy products. Thrusting strength test: Not lower than 1.0 kgf/cm ² .
beverages ⁽³⁾					
Plastic processed aluminum foil as a part of the aluminum caps of containers and packages.	The surface in direct contact with food is plastic: Arsenic: Not more than 2 ppm (as As ₂ O ₃ Cadmium: Not more than 100 ppm. Lead: Not more	Water	60°C for 30 min	Consumption of potassium permanganate: Not more than 5 ppm. Phenol: Negatives. Formaldehyde: Negatives.	Breaking force test: Not lower than 2.0 kgf/cm ² .

	than 100 nnm	10/	60°C for	Posiduos ofter	
	If the surface in	+/0	20 min	Not Not	
	li ule sullace ili	Acelic	50 11111	evaporation. Not	
		acia		more than 15	
	with food is			ppm.	
	polyvinyl			Heavy metals: Not	
	chloride, it shall			more than I ppm	
	additionally meet			(as Pb)	
	the following				
	requirements:				
	Dibutyltin: Not				
	more than 50				
	ppm (as				
	dibutyltin				
	dichloride)				
	Cresvl				
	phosphate:				
	Not more than				
	1000 ppm				
	Vinvl chloride				
	monomer: Not				
	more than 1				
	nore than 1				
Matala and for	1 The motel cong of	hall maat	the require	monte est for motal	
ivietais cans for	1. The metal cans s	snan meet	the require	ments set for metal	
milk powers	cans for dairy pro	Daucis. (DE)		1	
	2.0nly polyetnyle	ne(PE)o	r poly (ethy	(iene terephinalate)	
	(PEI) synthetic r	esins are	permitted I	or use at sealing	
	portion. These tw	o synthet	ic resins sh	all meet the	
	respective require	ements as	stated abov	ve.	
Containers and	Same as the	Water	60°C for	Consumption of	Breaking force test: Not lower
packages made	requirements for		30 min	potassium	than 2.0 kgf/cm ² for those
of multi-layer	polyethylene			permanganate:	containing less than 300 mL
synthetic resin	containers and			Not more than 5	food contents, and not lower
for milk powder	packages for			ppm.	than 5.0 kgf/cm ^{2} for those
⁽⁴⁾ - For those	dairy products.	4%	60°C for	Heavy metals: Not	containing more than 300
using		Acetic	30 min	more than 1 ppm	mL food contents. (In the
polyethylene as		acid		(as Pb)	latter case if there is outer
the material of		n-	25% for 1	Residues after	package and the inner and
the inner side		Heptane	hour.	evaporation: Not	the outer packages together
which is in		-		more than 15	have a breaking force of not
direct contact				ppm.	lower than 10.0 kgf/cm ² , the
with food				11	breaking force of the inner
contents.					package shall not be lower
					than 2.0 kgf/cm ² .)
					Sealing strength test: Shall
					not have damage or leakage.
Containers and	-	1			
	Cadmium: Not	Water	60°C for	Consumption of	Breaking force test: The same
nackages made	Cadmium: Not more than 100	Water	60°C for 30 min	potassium	Breaking force test: The same
packages made	Cadmium: Not more than 100	Water	60°C for 30 min	potassium	Breaking force test: The same as above. Sealing strength test: The
packages made of multi-layer synthetic resin	Cadmium: Not more than 100 ppm. Lead: not more	Water	60°C for 30 min	potassium permanganate: Not more than 5	Breaking force test: The same as above. Sealing strength test: The same as above
packages made of multi-layer synthetic resin for milk	Cadmium: Not more than 100 ppm. Lead: not more than 100 ppm	Water	60°C for 30 min	potassium permanganate: Not more than 5	Breaking force test: The same as above. Sealing strength test: The same as above.

	1			
powders ⁽⁴⁾ - For	4%	60°C for	Heavy metals: Not	
those using	Acetic	30 min	more than 1 ppm	
poly(ethylene-	acid		(as Pb)	
terephthalate)			Antimony: Not	
as the material			more than 0.025	
of the inner side			ppm.	
which is in			Germanium: Not	
direct contact			more than 0.05	
with food			ppm.	
contents.	n-	25% for 1	Residues after	
	Heptane	hour.	evaporation: Not	
	_		more than 15	
			ppm.	

⁽¹⁾ The dairy products include fresh milk, partially skimmed milk, skimmed milk, flavored milk, fermented milk, lactic acid bacteria beverages, milk-containing beverages, cream and butter.

(2) Containers and packages made of polyethylene-processed paper are referred only to those in which the portion directly in contact with food contents is polyethylene.

(3) Composite containers and packages are those made of two or more materials of synthetic resin, synthetic-resin-processed paper, synthetic-resin-processed aluminum foil or metals.

- (4) The milk powders include whole fat milk powder, partially skimmed milk powder, skimmed milk powder, and formulated milk powder.
- (5) Sweetened or unsweetened condensed whole fat milk and sweetened or unsweetened condensed skim milk for sale shall be packed in tightly sealable metal cans. Whole fat milk powder, skim milk powder, sweetened milk powder and formulated milk powder shall use packaging materials impervious to light, air and moisture or be filled in tightly sealable metal cans.