

Fatal and non-fatal accidents in bread/cake products in Japan in 1999-2021

bread/cake products industry Code No.010104

Type of accidents in bread/cake products in 1999-2021

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Type of accidents
fall from height	81	67	97	76	84	91	77	93	114	100	95	95	88	84	90	78	86	98	95	105	92	110	102	2,098	fall from height
falling to same level	208	207	245	229	275	235	263	261	296	306	287	307	273	303	310	295	329	345	349	354	335	323	341	6,676	falling to same level
crash	30	39	35	31	35	41	38	45	53	44	52	57	40	39	41	51	47	48	46	63	51	66	56	1,048	crash
struck by flying or falling object	37	31	26	35	34	25	24	40	44	39	45	47	35	35	38	40	23	49	39	34	37	37	32	826	struck by flying or falling object
collapse	6	8	6	8	15	10	10	8	9	3	11	20	11	12	12	18	10	17	18	17	21	13	11	274	collapse
crashed by	22	15	26	20	23	22	29	27	31	25	21	24	26	20	25	23	28	34	34	26	35	24	32	592	crashed by
caught in/between	454	465	481	442	432	421	462	421	397	402	361	372	366	334	337	311	300	290	336	326	311	261	287	8,569	caught in/between
cut	147	167	170	144	142	149	112	109	131	128	113	128	100	119	86	111	103	99	87	79	73	83	85	2,665	cut
injury to the sole of the foot	2		1	1	1	1	1	3	3		1			2	2		1	2	1		1		2	25	injury to the sole of the foot
drown					1								3											4	drown
contact to high/low-temperature	65	53	52	68	68	54	56	55	62	82	55	52	45	64	59	61	59	65	50	74	50	74	76	1,399	contact to high/low-temperature
contact to harmful	4	1	6	8	6	3	6	5	11	6	4	6	11	7	6		7	7	4	2	4	5	4	123	contact to harmful

substance																									substance
electric shock		6		1	2	1	2		2				2		1		1	1		3			1	23	electric shock
explosion	2	1	2				3	1		1				1		1	1	1			1			15	explosion
burst									1						1	1								3	burst
fire		1			1	1									1				1	1				6	fire
traffic accident (public road)	30	21	29	16	16	19	23	18	17	12	14	17	17	16	17	13	9	5	14	7	4	10	9	353	traffic accident (public road)
traffic accident (others)				1	2					1		1			1					2	1			9	traffic accident (others)
reaction to motion/improper motion	72	74	55	71	63	67	79	69	96	101	85	87	77	85	102	98	121	102	96	109	111	109	122	2,051	reaction to motion/improper motion
others	4	2	4	2	4	4	2		9	3	1	6	3	5	3	4	4	1	4	6	6	4	145	226	others
unclassifiable	1			1	1		2	3	1	1	2	2		1	1	2		1	1	1	3			24	unclassifiable
total	1,165	1,158	1,235	1,154	1,205	1,144	1,189	1,158	1,277	1,254	1,147	1,221	1,097	1,127	1,131	1,107	1,130	1,165	1,175	1,209	1,136	1,120	1,305	27,009	total

Causal agents (large) of fatal and non-fatal accidents in bread/cake products in 1999-2021

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (L) agents
machine	527	537	558	503	477	482	490	425	422	433	395	438	391	374	369	337	307	315	331	325	296	265	291	9,288	machine
crane, conveying machine	114	103	119	107	116	110	118	125	122	114	94	102	95	83	76	82	71	80	105	89	74	89	60	2,248	crane, conveying machine
other equipment	154	141	158	156	187	157	152	173	226	203	171	197	182	193	184	213	240	259	222	232	239	261	268	4,568	other

																									equipment
temporary buildings, establishments	210	228	254	236	275	256	285	269	312	321	295	316	269	315	313	300	324	347	331	374	345	331	355	6,861	temporary buildings, establishments
substance, material	41	32	41	34	51	39	42	34	44	40	48	35	36	34	34	50	41	42	40	34	37	33	34	896	substance, material
load	48	54	56	52	37	42	49	51	70	64	66	55	43	54	73	48	68	58	56	72	61	68	58	1,303	load
environment	17	19	12	23	13	16	9	28	20	20	17	18	24	25	29	20	19	16	24	25	17	23	32	466	environment
others	54	44	37	43	49	42	44	53	61	59	61	60	57	49	53	57	60	48	66	58	67	50	207	1,379	others
total	1,165	1,158	1,235	1,154	1,205	1,144	1,189	1,158	1,277	1,254	1,147	1,221	1,097	1,127	1,131	1,107	1,130	1,165	1,175	1,209	1,136	1,120	1,305	27,009	total

Causal agents (middle) of fatal and non-fatal accidents in bread/cake products in 1999-2021

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (M) agents	
engine						1			1																2	engine
power transmission mechanism	25	16	17	22	8	13	9	10	13	12	17	14	8	11	5	13	14	10	13	16	10	10	12	298	power transmission mechanism	
woodworking machine	1		1		1	1			1	1				1				3	1						11	woodworking machine
construction machine															2										2	construction machine
metal manufacturing machine	22	16	8	2	5	1	4	4	4	3	1	2		2	1	1		1		2			2	81	metal manufacturing machine	

general machine	479	505	532	479	463	466	477	411	403	417	377	422	383	360	361	323	293	301	317	307	286	255	277	8,894	general machine	
mobile silviculture machine																										mobile silviculture machine
crane	8	5	5	4	3	11	7	4	9	3	2	12	2	5	4	5	4	2	2	4	3	1	3	108	crane	
conveying machine	82	78	93	89	95	79	90	103	96	93	78	76	79	61	59	62	57	72	85	75	63	77	50	1,792	conveying machine	
vehicle	24	20	21	14	18	20	21	18	17	18	14	14	14	17	13	15	10	6	18	10	8	11	7	348	vehicle	
pressure vessel	2	3	3	2	2	2	4	3	3	3	6	1				3		3		1	1	3		45	pressure vessel	
chemical facilities	1												1					1						3	chemical facilities	
welding equipment					1																			1	welding equipment	
kiln, caldron	6	4	4	6	4	4	3	5	5	4	1	4	2	3		5	4	3	5	6	4	5	6	93	kiln, caldron	
electric equipment	5	3	2	2		2	2	4	4	2		3	2	3	2	2	1	3	4	1	5	6	3	61	electric equipment	
human power machine, tools	54	54	69	50	72	50	49	66	77	69	65	71	69	74	76	76	80	102	70	78	99	92	94	1,656	human power machine, tools	
tools	63	53	63	62	69	71	62	72	87	88	73	84	73	77	83	94	109	101	103	103	100	105	109	1,904	tools	
other equipments, facilities	23	24	17	34	39	28	32	23	50	37	26	34	35	36	23	33	46	46	40	43	30	50	56	805	other equipments, facilities	
temporary buildings, establishments	210	228	254	236	275	256	285	269	312	321	295	316	269	315	313	300	324	347	331	374	345	331	355	6,861	temporary buildings, establishments	

hazards, harmful substances	12	7	16	9	14	9	17	5	12	13	14	9	14	12	10	17	17	19	14	9	11	9	11	280	hazards, harmful substances
materials	29	25	25	25	37	30	25	29	32	27	34	26	22	22	24	33	24	23	26	25	26	24	23	616	materials
load	48	54	56	52	37	42	49	51	70	64	66	55	43	54	73	48	68	58	56	72	61	68	58	1,303	load
natural environment	17	19	12	23	13	16	9	28	20	20	17	18	24	25	29	20	19	16	24	25	17	23	32	466	natural environment
other causal agent	18	10	12	11	15	10	11	13	19	16	11	6	15	14	18	13	13	9	16	8	14	10	155	437	other causal agent
no causal agent	33	33	25	30	32	32	32	37	41	43	44	52	42	34	34	41	45	39	49	49	50	38	52	907	no causal agent
unclassifiable	3	1		2	2		1	3	1		6	2		1	1	3	2		1	1	3	2		35	unclassifiable
total	1,165	1,158	1,235	1,154	1,205	1,144	1,189	1,158	1,277	1,254	1,147	1,221	1,097	1,127	1,131	1,107	1,130	1,165	1,175	1,209	1,136	1,120	1,305	27,009	total

Causal agents (small) of fatal and non-fatal accidents in bread/cake products in 1999-2021

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (S) agents
engine									1															1	engine
power transmission mechanism			17		8		9	10	13	12	17	14	8	11	5	13	14	10	13	16	10	10	12	222	power transmission mechanism
circular sawing machine			1						1	1				1				2	1					7	circular sawing machine
band sawing machine																									band sawing machine
wood planer machine																									wood planer machine





machine																								machine
other mobile silviculture machine																								other mobile silviculture machine
crane		1										1	1		1		1			1			6	crane
mobile crane																								mobile crane
derrick crane																								derrick crane
elevator, lift		2		2		7	3	9	2	2	11	1	4	4	4	3		2	3	1		3	63	elevator, lift
cargo lifting appliance																								cargo lifting appliance
gondola																								gondola
lumberyard equipment, logging cableway																								lumberyard equipment, logging cableway
simple skyline yarding equipment																								simple skyline yarding equipment
other powered crane		2		1			1		1		1					1	1		1	1	1		11	other powered crane
truck		33		29		21	22	23	15	19	19	15	12	13	9	9	15	16	14	11	20	10	325	truck
forklift		7		6		6	8	11	8	8	7	10	8	4	5	6	12	9	11	8	3	5	142	forklift
railway equipment																								railway equipment
conveyor		52		57		62	71	57	69	49	48	50	39	41	46	39	41	59	46	42	50	34	952	conveyor
loader																								loader
straddle carrier																								straddle carrier
rough terrain hauler				1																			1	rough terrain hauler
other powered		1		2		1	2	5	1	2	2	4	2	1	2	3	4	1	4	2	4	1	44	other powered



conveying machines																								conveying machines	
cars, bus, motorcycle			21		18		21	18	16	18	14	14	13	16	13	15	10	6	18	7	7	11	6	262	cars, bus, motorcycle
railway vehicle																									railway vehicle
other vehicles								1				1	1						3	1		1	8	other vehicles	
boiler			1				2		1		2										1		7	boiler	
pressure vessel			1				1	2	1	3	2					2		1			1	1		15	pressure vessel
other pressure vessels			1		2		1	1	1		2	1				1		2		1		1		14	other pressure vessels
chemical facilities													1					1						2	chemical facilities
gas welding equipment					1																			1	gas welding equipment
arc welding equipment																									arc welding equipment
other welding equipment																									other welding equipment
kiln, caldron			3		3		2	3	3	4	1	2	2	3		5	3	1	4	3	3	3	4	52	kiln, caldron
industrial dryer								1	1			2					1			2	1			8	industrial dryer
other kiln, caldron			1		1		1	1	1									2	1	1		2	2	13	other kiln, caldron
transmission			1				1	1	1			2			1	1		3	3		4	6		24	transmission
electric power facilities									2			1	1	2									1	7	electric power facilities
other electrical equipment			1				1	3	1	2			1	1	1	1	1		1	1	1		2	18	other electrical equipment
human power					2			1	1	1	1		1	1		1		1			7	6	16	39	human power

cranes																									cranes
human power hauling equipment			46		41		40	51	47	49	48	50	60	52	57	55	64	81	52	55	74	72	57	1,051	human power hauling equipment
human power machine			1						1	1	1			1	1	1	1	1	2	2		2		15	human power machine
hand tool			22		29		9	14	28	18	15	21	8	20	18	19	15	19	16	21	18	12	21	343	hand tool
ladder			30		30		25	29	36	36	32	35	33	27	32	33	35	38	39	42	39	43	39	653	ladder
slinging tool																		1						1	slinging tool
other tools			33		39		37	43	51	52	41	49	40	50	51	61	74	62	64	61	61	62	70	1,001	other tools
other equipment, facilities			17		39		32	23	50	37	26	34	35	36	23	33	46	46	40	43	30	50	56	696	other equipment, facilities
scaffolding			1								1	1			1			1	2		1			8	scaffolding
timbering													1											1	timbering
stairs, landing stage			50		40		43	37	56	52	48	44	42	59	45	53	53	48	51	49	63	62	63	958	stairs, landing stage
opening								1	3	3	2	2	2	1	1	4	2	4	3	1	2	1	2	34	opening
roof, beam, haze, crossbeam, principal rafter			2		3		3	1	2	1	1	2	1	4	1	1	1		1	1	2		2	29	roof, beam, haze, crossbeam, principal rafter
working platform, boot board			43		65		43	57	48	61	53	64	51	54	47	64	56	67	65	62	69	49	49	1,067	working platform, boot board
passage			122		121		147	132	142	164	143	156	136	156	166	140	171	170	172	214	165	169	188	2,974	passage
building, establishment			20		27		25	28	45	23	33	21	21	22	28	22	27	38	22	26	24	23	29	504	building, establishment
other temporary buildings, establishments			16		19		24	13	16	17	14	26	15	19	24	16	14	19	15	21	19	27	22	356	other temporary buildings, establishments

explosive substance			2			1																3	explosive substance	
inflammable substance			4		1	1			2		1	1		1	2	1		1		1			16	inflammable substance
inflammable gas			1		2	5	2		2			1			1	2	2			1		1	20	inflammable gas
harmful substance			1			5	1	1	6		2	9	4	3	2	4	4	3	1		1	1	48	harmful substance
radiation																								radiation
other hazards, harmful substances			8		11	5	2	11	3	14	6	3	8	6	12	10	13	10	8	9	8	9	156	other hazards, harmful substances
metal material			8		10	9	16	13	9	16	8	8	9	5	8	6	8	10	12	7	13	8	183	metal material
lumber, bamboo			3		4	1	1	1	1	1	1				4			2		2		1	22	lumber, bamboo
stone, sand, substance			1						1					1	1								4	stone, sand, substance
other materials			13		23	15	12	18	16	17	17	14	13	18	20	18	15	14	13	17	11	14	298	other materials
load			51		35	44	49	65	60	60	53	38	51	66	44	64	56	52	70	59	64	57	1,038	load
machine/equipment as load			5		2	5	2	5	4	6	2	5	3	7	4	4	2	4	2	2	4	1	69	machine/equipment as load
natural ground, rock											1												1	natural ground, rock
standing tree											1							3					4	standing tree
water			1		4	1	5		4		1	6	3	5	2	1	3	2	2	6	4	3	53	water
abnormal environment							4	2			1	1	1										9	abnormal environment
high/cold temperature environment			4		2	3	6	8	9	8	6	5	8	12	7	10	7	7	14	9	16	12	153	high/cold temperature environment

other environments			7	7	5	13	10	7	9	8	12	13	12	11	8	6	12	9	2	3	17	171	other environments
other causal agent			12	15	11	13	19	16	11	6	15	14	18	13	13	9	16	8	14	10	155	388	other causal agent
no causal agent			25	32	32	37	41	43	44	52	42	34	34	41	45	39	49	49	50	38	52	779	no causal agent
unclassifiable				2	1	3	1		6	2		1	1	3	2		1	1	3	2		29	unclassifiable
total			1,235	1,205	1,189	1,158	1,277	1,254	1,147	1,221	1,097	1,127	1,131	1,107	1,130	1,165	1,175	1,209	1,136	1,120	1,305	22,388	total

#### Workers age of fatal and non-fatal accidents in bread/cake products in 1999-2021

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age
19 years old or less	58	61	61	42	48	31	46	41	53	35	45	40	44	28	20	31	44	32	29	25	31	42	22	909	19 years old or less
20-29	272	244	261	231	247	247	237	213	209	196	205	195	196	192	197	200	160	165	190	183	176	177	262	4,855	20-29
30-39	186	167	180	187	202	217	190	207	232	218	200	209	177	206	198	153	185	173	128	170	153	161	176	4,275	30-39
40-49	249	245	266	236	232	216	231	200	248	251	202	240	222	234	249	246	234	236	268	228	209	205	236	5,383	40-49
50-59	293	314	342	323	326	322	371	353	383	365	318	341	296	279	280	284	310	348	345	352	286	303	326	7,460	50-59
60 years old or more	107	127	125	135	150	111	114	144	152	189	177	196	162	188	187	193	197	211	215	251	281	232	283	4,127	60 years old or more
total	1,165	1,158	1,235	1,154	1,205	1,144	1,189	1,158	1,277	1,254	1,147	1,221	1,097	1,127	1,131	1,107	1,130	1,165	1,175	1,209	1,136	1,120	1,305	27,009	total

#### Workers' number of workplace of fatal and non-fatal accidents in bread/cake products in 1999-2021

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Workers scale
9 workers or less	164	142	151	150	157	128	126	106	93	104	98	109	85	102	75	59	60	74	79	59	53	43	61	2,278	9 workers or less
10-29	245	257	254	237	208	205	232	220	176	198	178	202	157	157	167	155	149	130	123	145	109	124	154	4,182	10-29
30-49	166	179	197	148	156	169	174	182	173	167	151	160	139	141	117	117	128	105	132	137	136	113	120	3,407	30-49











injury to the sole of the foot																								injury to the sole of the foot	
drown				1								3											4	drown	
contact to high/low-temperature			1										1	2									4	contact to high/low-temperature	
contact to harmful substance		1				1																	2	contact to harmful substance	
electric shock																								electric shock	
explosion																		1					1	explosion	
burst																								burst	
fire																								fire	
traffic accident (public road)	2	3	1	1	2	2	3	1			1				1			1			1	1	20	traffic accident (public road)	
traffic accident (others)																								traffic accident (others)	
reaction to motion/improper motion																								reaction to motion/improper motion	
others												1									1		2	others	
unclassifiable																								unclassifiable	
total	6	6	5	4	7	7	7	2		1	2	4	5	1	3	2	5	1	3		4	2	2	79	total

Causal agents (large) of fatal accidents in bread/cake products in 1999-2021

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (L) agents
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load																								load	
natural environment			1								1	4	1	2									9	natural environment	
other causal agent																								other causal agent	
no causal agent																			1				1	no causal agent	
unclassifiable																								unclassifiable	
total	6	6	5	4	7	7	7	2		1	2	4	5	1	3	2	5	1	3		4	2	2	79	total

Causal agents (small) of fatal accidents in bread/cake products in 1999-2021

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (S) agents	
engine																										engine
power transmission mechanism																										power transmission mechanism
circular sawing machine																										circular sawing machine
band sawing machine																										band sawing machine
wood planer machine																										wood planer machine
hollow chisel mortiser, wood borer																										hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine																										chamfering machine, router, woodworking













other hazards, harmful substances																								other hazards, harmful substances	
metal material																								metal material	
lumber, bamboo																								lumber, bamboo	
stone, sand, substance																								stone, sand, substance	
other materials																								other materials	
load																								load	
machine/equipment as load																								machine/equipment as load	
natural ground, rock											1											1	natural ground, rock		
standing tree																								standing tree	
water												4										4	water		
abnormal environment																								abnormal environment	
high/cold temperature environment			1										1	2									4	high/cold temperature environment	
other environments																								other environments	
other causal agent																								other causal agent	
no causal agent																					1		1	no causal agent	
unclassifiable																								unclassifiable	
total	6	6	5	4	7	7	7	2		1	2	4	5	1	3	2	5	1	3		4	2	2	79	total



January			1			1	2												2			6	January		
February		3			1	1				1				1			1						8	February	
March	1				1			1					4						2			1	10	March	
April					1	1	1					1											4	April	
May	2		1	2			1				1				1	1				1		1	11	May	
June	1	1					2							1									5	June	
July					1		1			1		1		1		1							6	July	
August	1		2	1		2							1	1		2					1		11	August	
September				1																			1	September	
October	1					2																1	4	October	
November		1			1							1				1	1						5	November	
December		1	1		2			1			1	1										1	8	December	
total	6	6	5	4	7	7	7	2		1	2	4	5	1	3	2	5	1	3		4	2	2	79	total

Prefecture of fatal accidents in bread/cake products in 1999-2021

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Prefecture	
Hokkaido							1					1							1		1			4	Hokkaido	
Aomori																					1			1	Aomori	
Iwate		1											1											2	Iwate	
Miyagi				1	1	1							3											6	Miyagi	
Akita																										Akita
Yamagata													1											1	Yamagata	
Fukushima						1														1				2	Fukushima	
Ibaraki			1				1										1					2		5	Ibaraki	



Okayama																										Okayama	
Hiroshima	1														1											2	Hiroshima
Yamaguchi																											Yamaguchi
Tokushima																											Tokushima
Kagawa																											Kagawa
Ehime					2										1											3	Ehime
Kochi																											Kochi
Fukuoka							1	1								1										3	Fukuoka
Saga																											Saga
Nagasaki			1																							1	Nagasaki
Kumamoto																											Kumamoto
Oita																											Oita
Miyazaki																											Miyazaki
Kagoshima						1																				1	Kagoshima
Okinawa		1												1												2	Okinawa
total	6	6	5	4	7	7	7	2		1	2	4	5	1	3	2	5	1	3		4	2	2	79	total		

Data sources: <https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.htm> (MHLW, Japan)

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