

Thai Zingiberaceae of pharmacological interest

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Table S1 Ethnomedicinal uses of gingers in Thailand.

Plant Name	Uses (Preparation/Application)	References
<i>Alpinia</i>		
<i>Alpinia calcarata</i> (Haw.) Roscoe	Diarrhea (dc/oi), diuretic agents (dc/oi)	Anderson (1993), Srithi (2012)
<i>Alpinia conchigera</i> Griff.	Asthma (cr/al), diabetes mellitus (un/un)	Chuakul et al. (2004), Chuakul and Boonpleng (2003)
<i>Alpinia galanga</i> (L.) Willd.	Amenorrhoea (un/un), anaesthesia (sw/ba), anthelmintic (un/un), back and waist pain (dc/oi), carminative (un/un), colitis (cf/oi), congestion (un/un), convulsion (un/un), cough (dc/oi), dermatophytosis (un/un), diarrhea (np/oi), dizziness (cr/sm), fever (dc/oi), flatulence (dc/ba), headache (dc/oi), hypertension (un/un), insect bites and stings (dc/oi), laxative (un/un), muscular relaxation (un/un), paralysis (un/un), peptic ulcers (un/un), postpartum abdominal pain (un/un), postpartum nervous (dc/ba), postpartum tonic (un/un), toothache (dc/oi), venomous animal bites (cr/al)	Chuakul (2012), Chuakul and Boonpleng (2003), Chuakul et al. (2002a), Gunsuwan (2011), Inta (2008), Jitjum et al. (2019), Kaewwongsiri and Saiyapan (2004), Khonkayan et al. (2019), Khuankaew (2014), Neamsuvan (2013a), Nuammee (2012), Pannet (2008), Panyadee et al. (2019), Ponpim (1996), Pantarod (2002), Purintavaragul et al. (2012), Sonsupub (2010), Srithi (2012), Thaenkam et al. (2019), Winijchaiyanan (1995)
<i>Alpinia malaccensis</i> (Burm.f.) Roscoe	Abdominal pain (np/oi), cough (dc/oi), dermatophytosis (po/un), flatulence (np/oi), food poisoning (np/oi), indigestion (dc/oi), pruritus (dc/oi), stomach ache (dc/oi), tuberculosis (dc/oi)	Anderson (1993), Kaewsangai (2017), Kantasrila (2016), Neamsuvan et al. (2014), Neamsuvan and Tuntien (2015), Panyadee et al. (2019), Srisanga et al. (2011), Sukkho (2008)
<i>Alpinia mutica</i> Roxb.	Tonic (un/un), urinary stones (un/un)	Chuakul and Boonpleng (2003), Upho (2005)
<i>Alpinia nigra</i> (Gaertn.) Burt	Chronic rash (un/un), fever (un/un), stop bleeding (un/un), tonic (un/un), wounds (un/al)	Charnprasert and Chansuwanit (1992), Chuakul and Boonpleng (2003)
<i>Alpinia oxymitra</i> K.Schum.	Tonic (un/un)	Chuakul and Boonpleng (2003)
<i>Alpinia roxburghii</i> Sweet	Dysmenorrhoea (un/un), haematonic (un/un)	Chuakul and Boonpleng (2003), Kaewsangai (2017), Kantasrila (2016)
<i>Alpinia siamensis</i> K.Schum.	Dermatophytosis (po/un), internal bruises (dc/un), muscular relaxation (dc/ba)	Wayo (2012)
<i>Alpinia zerumbet</i> (Pers.) B.L.Burtt & R.M.Sm.	Anthelmintic (sw/oi), cold (dc/oi), cough (dc/oi), diarrhea (un/un), earache (un/al), faintness (pd/oi), fever (dc/oi), flu-like syndrome (dc/oi), hives (dc/ba),	Anderson (1993), Chuakul (2012), Chuakul and Boonpleng (2003), Chuakul et al. (2002a), Kaewwongsiri and Saiyapan (2004), Neamsuvan and

	paralysis (un/un), peptic ulcers (dc/oi), tonic (un/un)	Tuntien (2015), Nuammee (2012), Panyaphu (2012), Srithi (2012), Tangtragoon (1998), Yaso (2000)
Amomum		
<i>Amomum curtisii</i> (Baker) Skornick. & Hlavatá	Abdominal pain (un/un), flatulence (un/un)	Chuakul and Boonpleng (2003) Upho (2005)
<i>Amomum dealbatum</i> Roxb.	Abdominal pain (un/un), colitis (un/un), cough (dc/oi)	Inta (2008), Nuammee (2012), Srithi (2012)
<i>Amomum siamense</i> Craib	Muscle discomfort (un/un)	Anderson (1993)
<i>Amomum trilobum</i> Gagnep.	Haematonic (un/un)	Chuakul and Boonpleng (2003)
Boesenbergia		
<i>Boesenbergia longiflora</i> (Wall.) Kuntze	Tonic (un/un)	Chuakul and Boonpleng (2003)
<i>Boesenbergia plicata</i> (Ridl.) Holttum	Cardiotonic (un/un), fever (un/un), flatulence, tonic (un/un)	Juntarapol et al (2014), Thaenkam et al. (2019), Upho (2005)
<i>Boesenbergia rotunda</i> (L.) Mansf.	Anuria (un/un), canker (un/un), cardiotonic (dc/oi), carminative (un/un), colitis (un/un), diuretic agents (un/un), dysentery (un/un), flatulence (dc/oi), galactagogue (un/un), haemagogue (un/un), halitosis (un/un), oedema (un/un), paralysis (un/un), sexual stimulant (un/un), tonic (un/un) urinary polyp (un/un), wasting disease (un/un)	Chuakul and Boonpleng (2003), Junkhonkaen (2012), Khonkayan et al. (2019), Khuankaew (2014), Neamsuvan (2013a), Neamsuvan (2013b), Neamsuvan et al. (2012), Sinworn and Viriyawattana (2014), Sonsupub (2010), Upho (2005), Winijchaiyanan (1995)
<i>Boesenbergia xiphostachya</i> (Gagnep.) Loes.	Flatulence (un/un), laxative (un/un)	Chuakul and Boonpleng (2003)
Curcuma		
<i>Curcuma aeruginosa</i> Roxb.	Abdominal pain (dc/oi), convulsion (un/un), cough (un/un), dysentery (po/oi), flatulence (dc/oi), headache (dc/oi), muscular relaxation (dc/oi), peptic ulcers (un/un), postpartum injuries (un/un), postpartum tonic (un/un), snake bites (dc/un), stomach ache (dc/oi), wounds (po/al)	Anderson (1993), Nuammee (2012), Phueaknang (2005), Srithi (2012), Sukkho (2008), Tichachart (2004)
<i>Curcuma amarissima</i> Roscoe	Abdominal pain (pd/oi)	Muangyen (2013)
<i>Curcuma angustifolia</i> Roxb.	Pruritus (po/al)	Sukkho (2008)
<i>Curcuma aurantiaca</i> Zijp	Hemostatic (un/un)	Chuakul and Boonpleng (2003)
<i>Curcuma comosa</i> Roxb.	Abdominal pain (un/un), amniotic fluid elimination (dc/oi), flatulence (dc/oi) hernia (un/un), irregular menstruation (dc/oi), muscular relaxation (dc/oi), oedema (dc/oi), peptic ulcers (un/un), postpartum injuries (un/un), postpartum tonic (un/un), uterine involution (un/un), women's tonic (dc/oi)	Chuakul and Boonpleng (2003), Imchan (2006), Neamsuvan et al. (2012), Nuammee (2012), Purintavaragul et al. (2012), Srithi (2012)
<i>Curcuma euchroma</i> Valetton	Peptic ulcers (un/oi)	Panyaphu (2012)

<i>Curcuma involucrata</i> (King ex Baker) Kornick.	Abdominal pain (un/un), anuria (un/un), constipation (un/un), diarrhea (un/un), flatulence (np/oi), internal body heat (dc/oi), sprain (dc/oi)	Anderson (1993), Nuammee (2012), Srithi (2012)
<i>Curcuma longa</i> L.	Abdominal pain (np/oi), abdominal pain (un/oi), bile tonic (un/un), bruised (po/ms), carminative (dc/oi), colitis (un/un), dermatosis (un/un), fever (dc/oi), flatulence (dc/oi), flu-like syndrome (cr/al), gastric ulcer (np/oi) gastritis (dc/oi), haemagogue (un/un) indigestion (un/un), intestinal infection (un/un), laxative (dc/oi), paralysis (un/un), peptic ulcers (un/un), postpartum tonic (un/st), pruritus (dc/un), sore throat (np/oi), sprain (hc/ms, stomach ache (dc/oi), tonic (dc/oi), urinary stones (hc/un), venomous animal bites (un/un), wounds (dc/al)	Anderson (1993), Chuakul (2005), Chuakul (2012), Chuakul and Boonpleng (2003), Chuakul et al. (2002a), Imchan (2006), Inta (2008), Junkhonkaen (2012), Neamsuvan and Tuntien (2015), Neamsuvan et al. (2012), Nuammee (2012), Pannet (2008), Panyadee et al. (2019), Ponpim (1996), Poonthananiwatkul et al. (2015), Purintavaragul et al. (2012), Siriyong et al. (2019), Srithi (2012), Sukkho (2008), tangitman (xxxx), Tovanaronte (1998), Wayo (2012), Winijchaiyanan (1995), Yaso (2000)
<i>Curcuma mangga</i> Valetton & Zijp	Anthelmintic (un/un), carminative (un/un), colitis (dc/oi), urinary stones (un/un)	Noitana (2013), Phueaknang (2005), Sonsupub (2010)
<i>Curcuma oligantha</i> Trimen	Tonic (un/un)	Chuakul and Boonpleng (2003)
<i>Curcuma parviflora</i> Wall.	Flatulence (dc/oi), flu-like syndrome (dc/oi), stop bleeding (un/un), wounds (un/al)	Anderson (1993), Inta et al. (2013), Neamsuvan and Tuntien (2015), Sinworn and Viriyawattana (2014)
<i>Curcuma sessilis</i> Gage	Carminative (un/un), flatulence (dc/oi), laxative (un/un), pruritus (sw/ba), tonic (un/un), wounds (un/un)	Chuakul and Boonpleng (2003), Jearanai (2012), Ponpim (1996), Thaenkam et al. (2019), Winijchaiyanan (1995)
<i>Curcuma sparganiifolia</i> Gagnep.	Asthma (dc/oi)	Chuakul and Boonpleng (2003), Chuakul et al. (2004)
<i>Curcuma zanthorrhiza</i> Roxb.	Amniotic fluid elimination (un/un), faintness (un/un), hemorrhoids (un/un), indigestion (un/un), irregular, menstruation (un/un), postpartum tonic (un/un)	Jearanai (2012), Phueaknang (2005)
<i>Curcuma zedoaria</i> (Christm.) Roscoe	Abdominal pain (un/un), blisters (un/un), chest oppression (un/un), colitis (un/un), congestion (un/un), dermatosis (un/un), dislocation (un/un), dysentery (dc/oi), fever (un/un), flatulence (dc/oi), headache (un/un), herpes (un/un), indigestion (un/un), loss of consciousness (dc/un), nasal polyp (un/un), paralysis (un/un), peptic ulcers (un/un), pruritus (un/un), wounds (dc/al)	Anderson (1993), Inta (2008), Junkhonkaen (2012), Kesornmas et al. (2019), Khonkayan et al. (2019), Neamsuvan (2013a), Neamsuvan (2013b), Neamsuvan et al. (2012), Neamsuvan et al. (2018), Pantarod (2002), Srithi (2012), Tovanaronte (1998)
<i>Etingera</i>		
<i>Etingera elatior</i> (Jack) R.M.Sm.	Anthelmintic (un/un), carminative (dc/oi), flatulence (un/oi), hypertension	Chuakul (2005), Junkhonkaen (2012), Srithi (2012), Upho (2005)

	(un/un), paralysis (pd/un), stomach ache (dc/oi)	
<i>Etlingera littoralis</i> (J.Koenig) Giseke	Anthelminthic (un/un), carminative (dc/oi), flatulence (un/oi), hypertension (un/un), paralysis (pd/un), stomach ache (dc/oi)	Chuakul (2005), Chuakul and Boonpleng (2003), Chuakul and Boonpleng (2003), Kaewwongsiri and Saiyapan (2004)
<i>Etlingera megalochelilos</i> (Griff.) A.D.Poulsen	Heart problems (dc/oi), tonic (dc/oi)	Anderson (1993), Srithi (2012)
<i>Etlingera punicea</i> (Roxb.) R.M.Sm.	Cardiotonic (pd/un), carminative (pd/un), stomachic (pd/un)	Chuakul (2005), Chuakul and Boonpleng (2003)
Gagnepainia		
<i>Gagnepainia thoreliana</i> (Baill.) K.Schum.	Hemostatic (pd/al), wounds (un/un)	Chuakul et al. (2004), Chuakul and Boonpleng (2003)
Globba		
<i>Globba candida</i> Gagnep.	Otitis (cr/al), otorrhea (un/un)	Chuakul et al. (2004), Chuakul and Boonpleng (2003)
<i>Globba geoffrayi</i> Gagnep.	Asthma (un/un)	Chuakul et al. (2004), Chuakul and Boonpleng (2003)
<i>Globba laeta</i> K.Larsen	Abdominal pain (dc/oi), flatulence (dc/oi), flu-like syndrome (dc/oi)	Imchan (2006), Neamsuvan and Tuntien (2015)
<i>Globba obscura</i> K.Larsen	Anuria (dc/oi), stomach ache (un/un), wounds (un/un)	Chuakul and Boonpleng (2003), Inta et al. (2013)
<i>Globba winitii</i> C.H.Wright	Flu-like syndrome (dc/oi)	Neamsuvan and Tuntien (2015)
Hedychium		
<i>Hedychium coccineum</i> Buch.-Ham. ex Sm.	Women's tonic (un/un)	Srithi (2012)
<i>Hedychium coronarium</i> J.Koenig	Cough (un/un), headache (dc/oi), muscular relaxation (dc/oi), sprain (un/ba), tonic (un/un), tuberculosis (dc/oi)	Anderson (1993), Chaunchom (2011), Chuakul and Boonpleng (2003), Ponpim (1996), Srisanga et al. (2011)
<i>Hedychium ellipticum</i> Buch.-Ham. ex Sm.	Abdominal pain (un/un), muscular relaxation (un/un)	Upho (2005)
<i>Hedychium flavum</i> Roxb.	Back and waist pain (un/un), bruised (un/un), postpartum tonic (un/un)	Srithi (2012), Winijchaiyanan (1995)
<i>Hedychium stenopetalum</i> Lodd.	Colitis (un/un), constipation (un/un)	Pantarod (2002)
Kaempferia		
<i>Kaempferia elegans</i> (Wall.) Baker	Fever (un/un), flatulence (un/un)	Chuakul and Boonpleng (2003), Kesornmas et al. (2019),
<i>Kaempferia filifolia</i> K.Larsen	Leucorrhoea (dc/oi)	Chuakul et al. (2004), Chuakul and Boonpleng (2003)
<i>Kaempferia galanga</i> L.	Abdominal pain (dc/oi), antipyretic (dc/un), anuria (un/un), carminative (dc/oi), cold (un/un), colitis (dc/oi), colitis (un/un), congestion (un/un), constipation (un/un), cough (dc/oi), dandruff (un/un), diarrhea (dc/oi), expectorant (dc/oi), fever (dc/oi), flatulence (un/un), food poisoning (un/un), hives (dc/oi), insect bites and stings (un/un), nosebleed (un/un),	Chuakul (2005), Chuakul (2012), Chuakul and Boonpleng (2003), Chuakul et al. (2002a), Imchan (2006), Inta (2008), Junkhonkaen (2012), Neamsuvan et al. (2012), Noitana (2013), Nuammee (2012), Panyadee et al. (2019), Phueaknang (2005), Ponpim (1996), Sinworn and Viriyawattana (2014), Srisanga et al. (2011), Srithi

	oedema (un/un), ophthalmitis (un/un), paralysis (un/un), plant poison (un/un), sore throat (un/un), stuffed nose (po/un), tonic (dc/un), urinary stones (dc/un), urinary stones (un/un), wounds (un/al)	(2012), Sukkho (2008), Wannasri and Buapan (2013), Yaso (2000)
<i>Kaempferia larsenii</i> Sirirugsa	Antidote (un/un) Insect bites and stings (pd/al)	Chuakul and Boonpleng (2003), Chuakul et al. (2004)
<i>Kaempferia parviflora</i> Wall. ex Baker	Abdominal pain (un/oi), anuria (un/un), aphrodisiac (dc/oi), blood tonic (un/oi), bruised (un/un), cardiogenic (un/un), cough (un/un), diarrhea (np/oi), dizziness (un/un), flatulence (dc/oi), food poisoning (dc/oi), gastritis (dc/oi), gout (un/un), laxative (un/un), men's tonic (dc/oi), paralysis (dc/oi), peptic ulcers (dc/oi), peptic ulcers (un/un), tonic (dc/oi), tuberculosis (dc/oi), wounds (pd/al)	Anderson (1993), Gunsuwan (2011), Imchan (2006), Inta (2008), Jearanai (2012), Junkhonkaen (2012), Kesornmas et al. (2019), Neamsuvan et al. (2012), Nuammee (2012), Panyaphu (2012), Phueaknang (2005), Srisanga et al. (2011), Srithi (2012), Sukkho (2008), Tovanaronte (1998)
<i>Kaempferia roscoeana</i> Wall.	Antidote (un/un), fever (dc/oi)	Chuakul and Boonpleng (2003), Inta et al. (2013b)
<i>Kaempferia rotunda</i> L.	Abdominal pain (un/un), antidote (un/un), back and waist pain (un/un), blood tonic (un/un), bruised (un/un), burns (un/un), diarrhea (un/un), flatulence (un/oi), laxative (dc/oi), muscular relaxation (un/un), nausea (dc/oi), peptic ulcers (un/un), stomach ache (dc/oi), stop bleeding (un/un), wounds (un/un)	Anderson (1993), Chuakul and Boonpleng (2003), Nuammee (2012), Srithi (2012)
<i>Rhynchanthus</i>		
<i>Rhynchanthus longiflorus</i> Hook.f.	Convulsion (dc/oi), hypertension (dc/oi)	Srisanga et al. (2011)
<i>Scaphochlamys</i>		
<i>Scaphochlamys biloba</i> (Ridl.) Holtum	Contraceptive (un/un)	Upho (2005)
<i>Stahlianthus campanulatus</i> Kuntze	Abdominal pain (np/oi), abdominal pain (un/un), anuria (un/un), diarrhea (un/un), flatulence (un/un), peptic ulcers (un/un)	Imchan (2006), Srithi (2012)
<i>Wurfbainia</i>		
<i>Wurfbainia biflora</i> (Jack) Skornick. & A.D.Poulsen	Bone and joint pain (un/un)	Srithi (2012)
<i>Wurfbainia testacea</i> (Ridl.) Skornick. & A.D.Poulsen	Asthma (dc/oi), carminative (un/un), colitis (un/oi), flatulence (dc/oi), flatulence (un/un), increase blood flow (dc/oi), irregular menstruation (dc/oi)	Chuakul and Boonpleng (2003), Junkhonkaen (2012), Neamsuvan et al. (2012), Siriyong et al. (2019)
<i>Wurfbainia uliginosa</i> (J.Koenig) Giseke	Carminative (un/un), peptic ulcers (dc/oi), pruritus (un/un), stomach ache (un/un)	Chuakul and Boonpleng (2003), Chuakul et al. (2002b), Phueaknang (2005)

<i>Wurfbainia vera</i> (Blackw.) Skornick. & A.D.Poulsen	Paralysis (un/un), zoster (pd/al)	Neamsuvan (2013a), Kaewwongsiri and Saiyapan (2004)
<i>Wurfbainia villosa</i> (Lour.) Skornick. & A.D.Poulsen	Anuria (un/un), carminative (un/un), paralysis (un/un), stomach ache (un/un)	Khonkayan et al. (2019), Neamsuvan (2013a), Neamsuvan et al. (2018) Chuakul and Boonpleng (2003), Junkhonkaen (2012)

Zingiber

<i>Zingiber chrysostachys</i> Ridl.	Tonic (un/un)	Chuakul and Boonpleng (2003)
<i>Zingiber kerrii</i> Craib	Carminative (dc/oi), flatulence (un/oi)	Inta et al. (2013)
<i>Zingiber latifolium</i> Theilade & Mood	Fractures (dc/oi), tonic (dc/oi)	Sukkho (2008)
<i>Zingiber montanum</i> (J.Koenig) Link ex A.Dietr.	Abdominal pain (dc/oi), amniotic fluid elimination (dc/oi), anthelmintic (un/un), aphthous ulcer (dc/oi), athlete's foot (cr/al), beriberi (un/un), bone and joint pain (po/al), bone symptoms (un/un) bruised (un/un), carminative (dc/oi), catepillar allergy (un/un), cold (un/un), colitis (un/un), congestion (un/un), conjunctivitis (hc/un), constipation (un/un), cough (un/un), dermatosis (po/un), diarrhea (un/un), eye pain (hc/un), fever (dc/ba), fever in children (un/un), flatulence (dc/oi), flu- like syndrome (cr/smell), fractures (po/un), gastric ulcer (dc/oi), hepatopathy (un/un), herpes (un/un) hives (un/un), insect bites and stings (po/al), insect repellent (un/un), jaundice (np/un), laxative (dc/oi), muscular relaxation (hc/ms), oedema (dc/oi) pain (dc/oi), paralysis (un/un), peptic ulcers (un/un), postpartum bath (dc/ba), postpartum haemagogue (un/un), postpartum injuries (un/un) ,postpartum tonic (dc/ba), postpartum tonic (dc/oi), pruritus (un/un), skin nourishment (un/un), sprain (hc/un), urinary stones (un/un), venereal disease (un/un) wounds (un/al)	Anderson (1993), Chuakul and Boonpleng (2003), Chuakul et al. (2002a), Imchan (2006), Inta (2008), Inta et al. (2013), Inta et al. (2013b), Jitjum et al. (2019), Junkhonkaen (2012), Kesornmas et al. (2019), Khuankaew (2014), Manenoon et al. (2017), Muangyen (2013), Neamsuvan (2013a), Neamsuvan and Tuntien (2015), Neamsuvan et al. (2012), Nuammee (2012), Pannet (2008), Pantarod (2002), Panyadee et al. (2019), Phueaknang (2005), Ponpim (1996), Purintavaragul et al. (2012), Sinworn and Viriyawattana (2014), Sonsupub (2010), Srithi (2012), Sukkho (2008), Suwanantawong (2011), tangjitman (xxxx), Tangtragoon (1998), Thangthaisong et al. (2011), Tovaranonte (1998), Trisonthi (XXXX), Upho (2005), Wayo (2012), Winijchaiyanan (1995)
<i>Zingiber niveum</i> Mood & Theilade	Flatulence (dc/oi), laxative (dc/oi), paralysis (un/un)	Chuakul and Boonpleng (2003), Chuakul et al. (2004), Thangthaisong et al. (2011)
<i>Zingiber officinale</i> Roscoe	Antiemetic (np/un), appetite stimulant (dc/oi), backache (dc/oi) colitis (dc/oi), convulsion (un/un), cough (dc/oi) , expectorant (np/un), fever (dc/oi), flatulence (dc/oi), headache (un/un), hemorrhoids (un/un), mouth polyp	Amorndoljai (2018), Anderson (1993), Chuakul and Boonpleng (2003), Chuakul et al. (2002a), Chuakul et al. (2006), Gunsuwan (2011), Imchan (2006), Junkhonkaen (2012), Kesornmas et al. (2019), Neamsuvan (2013a), Neamsuvan (2013b), Neamsuvan et al. (2012), Neamsuvan et al. (2018), Pannet

	(un/un), muscular relaxation (po/ms), nasal polyp (un/un), oedema (un/un) paralysis (un/un), postpartum, convulsion (un/un), postpartum tonic (un/un), pus (po/un), sore throat (un/un) tonic (dc/oi), trachoma (un/un), urinary, polyp (un/un), venereal disease (un/un), venomous animal bites (un/un), wounds (hc/ms)	(2008), Pantarod (2002), Panyadee et al. (2019), Siriyong et al. (2019) Sonsupub (2010), Srisanga et al. (2011), Srithi (2012), Sukkho (2008), Thaenkam et al. (2019), Tovaranton (1998), Wayo (2012), Winijchaiyanan (1995), Yaso (2000)
<i>Zingiber ottensii</i> Valetton	Abdominal pain (dc/oi), back and waist pain (un/un), caterpillar allergy (cr/un), colitis (un/un), diarrhea (dc/oi), flatulence (dc/oi), headache (po/ms), jaundice (un/un), laxative (dc/oi), muscular relaxation (po/ms), numbness (un/un), postpartum tonic (dc/oi), pruritus (po/ms), sore throat (po/ms), umbilical wound (np/oi)	Chuakul and Boonpleng (2003), Khonkayan et al. (2019), Nuammee (2012), Pannet (2008), Panyadee et al. (2019), Pipitkul (2001), Srithi (2012), Sukkho (2008), Upho (2005)
<i>Zingiber rubens</i> Roxb.	Stomach ache (un/un)	Anderson (1993)
<i>Zingiber smilesianum</i> Craib	Flatulence (un/oi)	Khuankaew (2014)
<i>Zingiber spectabile</i> Griff.	Tonic (un/un)	Chuakul and Boonpleng (2003)
<i>Zingiber wrayi</i> Prain ex Ridl.	Flu-like syndrome (dc/oi), galactagogue (un/un)	Chuakul and Boonpleng (2003), Neamsuvan and Tuntien (2015)
<i>Zingiber zerumbet</i> (L.) Roscoe ex Sm.	Amniotic fluid elimination (dc/oi), anuria (un/un), appetite stimulant (un/un), carminative (cr/oi), chest oppression (un/un), chronic fever (un/un), colitis (dc/oi), chronic fever (dc/oi), dysentery (dc/oi), expectorant (un/un), faintness (dc/oi), flatulence (dc/oi), galactagogue (dc/oi), haemagogue (dc/oi), indigestion (dc/oi), inflammation (un/un), laxative (dc/oi), muscular relaxation (dc/oi), paralysis (un/un), tonic (dc/oi)	Chuakul and Boonpleng (2003), Inta et al. (2013b), Kaewwongsiri and Saiyapan (2004), Khuankaew (2014), Neamsuvan (2013a), Neamsuvan et al. (2014), Neamsuvan and Tuntien (2015), Neamsuvan et al. (2012), Purintavaragul et al. (2012), Satean et al. (2018), Sinworn and Viriyawattana (2014), Sonsupub (2010)

al = applied locally, ba = bath, cr = crushed, cf = cooked as food, dc = decoction, hc = made a herbal compress, ms = massage, np = non-prepared, oi = oral ingestion, po = pounded, pd = powder, sm = smell, sw = soaked in water, un = unspecified

Table S2 Fidelity Level (FL) of gingers for treatments of some symptoms in Digestive system disorders.

Species	Abdominal Pain	Colitis	Diarrhea	Flatulence	Laxative	Peptic Ulcers
<i>Alpinia calcarata</i> (Haw.) Roscoe	0.00	0.00	0.03	0.00	0.00	0.00
<i>Alpinia conchigera</i> Griff.	0.00	0.00	0.00	0.00	0.00	0.00
<i>Alpinia galanga</i> (L.) Willd.	0.00	0.03	0.03	0.04	0.01	0.01
<i>Alpinia malaccensis</i> (Burm.f.) Roscoe	0.03	0.00	0.00	0.03	0.00	0.00

<i>Alpinia mutica</i> Roxb.	0.00	0.00	0.00	0.00	0.00	0.00
<i>Alpinia roxburghii</i> Sweet	0.00	0.00	0.00	0.00	0.00	0.00
<i>Alpinia zerumbet</i> (Pers.) B.L.Burtt & R.M.Sm.	0.00	0.00	0.01	0.00	0.00	0.03
<i>Amomum dealbatum</i> Roxb.	0.01	0.01	0.00	0.00	0.00	0.00
<i>Amomum testaceum</i> Ridl.	0.00	0.01	0.00	0.04	0.00	0.00
<i>Amomum uliginosum</i> J.Koenig	0.01	0.00	0.00	0.01	0.00	0.01
<i>Amomum villosum</i> Lour.	0.01	0.00	0.00	0.01	0.00	0.00
<i>Boesenbergia rotunda</i> (L.) Mansf.	0.00	0.01	0.00	0.07	0.00	0.00
<i>Boesenbergia xiphostachya</i> (Gagnep.) Loes.	0.00	0.00	0.00	0.01	0.01	0.00
<i>Curcuma aeruginosa</i> Roxb.	0.09	0.00	0.00	0.04	0.00	0.03
<i>Curcuma amarissima</i> Roscoe	0.01	0.00	0.00	0.00	0.00	0.00
<i>Curcuma comosa</i> Roxb.	0.01	0.00	0.00	0.01	0.00	0.01
<i>Curcuma euchroma</i> Valetton	0.00	0.00	0.00	0.00	0.00	0.01
<i>Curcuma longa</i> L.	0.05	0.04	0.00	0.07	0.03	0.11
<i>Curcuma mangga</i> Valetton & Zijp	0.00	0.01	0.00	0.01	0.00	0.00
<i>Curcuma parviflora</i> Wall.	0.00	0.00	0.00	0.01	0.00	0.00
<i>Curcuma sessilis</i> Gage	0.00	0.00	0.00	0.04	0.01	0.00
<i>Curcuma zanthorrhiza</i> Roxb.	0.00	0.00	0.00	0.00	0.00	0.00
<i>Curcuma zedoaria</i> (Christm.) Roscoe	0.01	0.01	0.00	0.01	0.00	0.01
<i>Elettariopsis curtisii</i> Baker	0.00	0.00	0.00	0.01	0.00	0.00
<i>Elettariopsis curtisii</i> Baker	0.03	0.00	0.00	0.03	0.00	0.00
<i>Etlingera elatior</i> (Jack) R.M.Sm.	0.01	0.00	0.00	0.03	0.00	0.00
<i>Etlingera littoralis</i> (J.Koenig) Giseke	0.00	0.00	0.00	0.03	0.00	0.01
<i>Etlingera punicea</i> (Roxb.) R.M.Sm.	0.00	0.00	0.00	0.03	0.00	0.00
<i>Globba laeta</i> K.Larsen	0.01	0.00	0.00	0.01	0.00	0.00
<i>Globba obscura</i> K.Larsen	0.01	0.00	0.00	0.00	0.00	0.00
<i>Hedychium coccineum</i> Buch.-Ham. ex Sm.	0.00	0.00	0.00	0.00	0.00	0.00
<i>Hedychium ellipticum</i> Buch.-Ham. ex Sm.	0.01	0.00	0.00	0.00	0.00	0.00
<i>Hedychium stenopetalum</i> Lodd.	0.00	0.01	0.00	0.00	0.00	0.00
<i>Kaempferia elegans</i> (Wall.) Baker	0.00	0.00	0.00	0.01	0.00	0.00
<i>Kaempferia filifolia</i> K.Larsen	0.00	0.00	0.00	0.00	0.00	0.00
<i>Kaempferia galanga</i> L.	0.07	0.04	0.01	0.04	0.00	0.00
<i>Kaempferia parviflora</i> Wall. ex Baker	0.07	0.00	0.03	0.05	0.01	0.05
<i>Kaempferia rotunda</i> L.	0.09	0.00	0.01	0.01	0.03	0.01
<i>Stahlianthus campanulatus</i> Kuntze	0.07	0.00	0.01	0.04	0.00	0.01
<i>Stahlianthus involucratus</i> (King ex Baker) Craib ex Loes.	0.04	0.00	0.03	0.01	0.00	0.00
<i>Zingiber kerrii</i> Craib	0.00	0.00	0.00	0.03	0.00	0.00
<i>Zingiber montanum</i> (J.Koenig) Link ex A.Dietr.	0.11	0.04	0.04	0.20	0.01	0.03
<i>Zingiber niveum</i> Mood & Theilade	0.00	0.00	0.00	0.01	0.03	0.00
<i>Zingiber officinale</i> Roscoe	0.00	0.01	0.00	0.04	0.00	0.00
<i>Zingiber ottensii</i> Valetton	0.11	0.03	0.04	0.08	0.07	0.00

<i>Zingiber rubens</i> Roxb.	0.01	0.00	0.00	0.00	0.00	0.00
<i>Zingiber smilesianum</i> Craib	0.00	0.00	0.00	0.01	0.00	0.00
<i>Zingiber zerumbet</i> (L.) Roscoe ex Sm.	0.00	0.03	0.00	0.09	0.01	0.00

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