CHAPTER 3

RESULTS

The results of the Microbial Limit tests of the drugs were shown in data as follows

3.1 Chloramphenicol palmitate syrup, fifty five samples of about 30 - 60 ml in suitable containers were tested and shown as table 6.

table 6. Identification of total aerobic microbial count/ml of Chloramphenicol palmitate syrup

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
1	Chloram.palm.	ove	-	-	-	-	318,500
2	Chloram.palm.	ove	-	-	-	-	39
3	Chloram.palm.	ove	-	-	-	-	93

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
4	Chloram.palm, Vit. B_{12}	Ove	-	-	-	-	43
5	Chloram.palm.	No growth					-
6	Chloram.palm.	Ove	-	-	-	-	93
7	Chloram.palm.	Ove	-	-	-	-	23
8	Chloram.palm.	Ove	-	-	-	-	13,800
9	Chloram.palm.	Ove	-	-	-	-	700
10	Chloram.palm	Ove	-	-	-	-	43
11	Chloram.palm.	No growth					-

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S. aureus	P.aeruginosa	E. coli	Salmonella spp.	
12	Chloram.palm.		No growth				-
13	Chloram.palm.		No growth				-
14	Chloram.palm.	⊕ve	-	-	-	-	23
15	Chloram.palm.	⊕ve	-	-	-	-	93
16	Chloram.palm.		No grwoth				-
17	Chloram.palm.	⊕ve	-	-	-	-	43
18	Chloram.palm.	⊕ve	-	-	-	-	240
19	Chloram.palm.		No growth				-

Item No	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus.	P.aeruginosa	E.coli	Salmonella spp.	
20	Chloram / Vitamins		No growth				-
21	Chloram.palm.	⊖ve	-	-	-	-	75
22	Chloram.palm.	⊖ve	-	-	-	-	43
23	Chloram.palm.		No growth				-
24	Chloram.palm.		No growth				-
25	Chloram.palm.	⊖ve	-	-	-	-	23
26	Chloram.palm.		No growth				-
27	Chloram.palm.	⊖ve	-	-	-	-	1,100
28	Chloram.palm.		No growth				-

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp	
29	Chloram.palm.	No growth					-
30	Chloram.palm.	⊖ve	-	+	-	-	2,700
31	Chloram.palm.	⊖ve	-	-	-	-	4,700
32	Chloram.palm.	⊕ve	-	-	-	-	28,000
33	Chloram.palm.	⊕ve	-	-	-	-	240
34	Chloram.palm.	⊖ve	-	+	-	-	282,500
35	Chloram.palm.	No growth					-
36	Chloram.Palm.	No growth					-
37	Chloram.palm.	⊖ve	-	-	-	-	110
38	Chloram.palm. Vits & minerals	No growth					-

Item No.	Acitve Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
39	Chloram.palm.	⊖ve	-	-	-	-	300,000
40	Chloram.palm.	⊖ve ⊖ve	-	-	-	-	83,000
41	Chloram.palm. + vits + minerals		No growth				-
42	Chloram.palm. Dihydrostreptomycin sulfate kaolin		No growth				-
43	Chloram.palm.	⊖ve	-	-	-	-	43
44	Chloram.palm.	⊖ve	-	-	-	-	23
45	Chloram.palm.	⊖ve	-	-	-	-	150
46	Chloram.palm.	⊖ve ⊖ve	-	-	-	-	150
47	Chloram.palm.		No growth				-

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
48	Chloram.palm.	⊖ve ⊖ve	-	-	-	-	240
49	Chloram.palm.	⊖ve	-	-	-	-	1,100
50	Chloram.palm.	⊖ve	-	-	-	-	38,500
51	Chloram.palm.	⊖ve	-	-	-	-	93
52	Chloram.palm.	⊖ve	-	+	-	-	1,100
53	Chloram.palm.	⊖ve	-	-	-	-	43
54	Chloram.palm. + Vits & minerals	⊖ve	-	-	-	-	50,500
55	Chloram.palm.	⊖ve	-	-	-	-	23

3.2 The results of Microbial Limit tests, fourty four samples of gel antacid containing from 120 ml up to 300 per package were shown in table 7 and of twenty three samples of tablet antacid were shown in table 8

Table 7. Identification and Total aerobic microbial count/ml of Antacids

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli.	Salmonella, spp.	
1.	Mag.trisil. Alum hydrox.	ve	-	-	-	-	1,100
2.	Alum.hydrox.Gel Mag.hydrox.	ve	-	-	-	-	45,000
3.	Alum.Gel	ve	-	-	-	-	150
4.	Dried. Alum.hydrox.Gel Mag.hydrox.	ve	-	-	-	-	43,500

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
5.	Alum. hydrox. Mag. hydrox.		No growth				-
6.	Dried Alum.hydrox. Mag.hydrox.	Ove Ove	-	-	-	-	134,500
7.	Alum. hydrox.Gel. Mag. trisil.	Ove	-	-	-	-	56,000
8.	Alum. hydrox.Gel.	Ove	-	-	-	-	59,000
9.	Alum.hydrox. Mag.hydrox.		No growth				-
10.	Alum.Oxide. Mag.hydrox.		No growth				-
11.	Alum.hydrox.		No growth				-
12.	Dried.Alum.hydrox,Gel Mag. trisil.	Ove	-	-	-	-	14,150
13.	Alum. Oxide.	Ove			-	-	150

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
14.	Dried Alum.hydrox.Gel	⊖ve	-	-	-	-	80,000
15.	Alum.hydrox.Gel Alum. Oxide.		No growth				-
16.	Alum. hydrox.Gel Mag. hydrox.	⊖ve	-	-	-	-	23
17.	Alum.hydrox.Gel		No growth				-
18.	Alum.hydrox.Gel Mag.trisil.	⊖ve	-	-	-	-	4,050
19.	Dried.Alum.hydrox.Gel Mag.hydrox.	⊖ve	-	-	-	-	240
20.	Alum.hydrox. Mag.hydrox.	⊖ve	-	-	-	-	23
21.	Mag.trisil. Alum.hydrox.		No growth				-
22.	Alum.hydrox.Gel	⊖ve	-	-	-	-	37,500
23.	Alum.hydrox. Gel	⊖ve	-	-	-	-	8,850

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Sal.Enteritidis spp	
24.	Alum.Oxide Mag.hydrox.	Gve	-	-	-	-	23
25.	Dried.Alum.hydrox.Gel Mag.trisil.	Gve	-	-	-	-	139,000
26.	Alum.hydrox.Gel		No growth				-
27.	Mag.hydrox. Alum.hydrox.Gel		No growth				-
28.	Alum.hydrox.Gel		No growth				-
29.	Alum.hydrox.Gel Mag.hydrox.		No growth				-
30.	"_____"	Gve	-	-	-	-	23
31.	Alum.hydrox.Gel	Gve	-	-	-	-	43
32.	Alum.hydrox.Gel Mag. hydrox.	Gve	-	-	-	-	22,800
33.	Alum.Oxide. Mag.hydrox.	Gve	-	-	-	-	1,100

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml.
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
34	Alum.hydrox. Gel Mag.Hydrox.	Ove	-	-	-	-	9,150
35	Dried Alum.hydrox. Gel	Ove	-	-	-	-	354,000
36	Alum.hydrox. Mag.hydrox.	Ove	-	+	-	-	43,500
37	Dried Alum.hydrox.Gel	Ove	-	-	-	-	141,000
38	Alum.hydrox. Gel Bismuth Carb. Mag.Trisil	Ove	-	+	-	-	34,000
39	Dried Alum. hydrox.Gel Mag Trisil.	Ove	-	+	-	-	1,100
40	Mag.Hydrox. Alum.hydrox.	No growth					-
41	Mag.Trisil. Alum.hydrox.	Ove	-	+	-	-	261,000
42	Alum.hydrox. Mag.hydrox.	No growth					-
43	Alum.hydrox. Mag.hydrox.	No growth					-
44	Dried.Alum.hydrox. Gel Mag.hydrox.	Ove Ove	-	-	-	-	93

Table 8. Identification and total aerobic microbial count/g of Antacids.

Item No.	Active Ingredient	Identification					Total aerobic microbial count/g
		Gram bacillus	S.aureus.	P.aeruginosa	E.coli.	Salmonella	
45	Aluminum Oxide	⊖ve	-	-	-	-	7
46	Mag.Trisil Alum.hydrox.	No growth					-
47	Alum.hydrox. Gel	No growth					-
48	Alum.hydrox. Gel Mag.Hydrox.	⊖ve	-	-	-	-	460
49	Alum.hydrox.	No growth					-
50	Alum.hydrox.	⊖ve	-	-	-	-	43
51	Alum.hydrox. Mag.Hydrox.	⊖ve	-	-	-	-	202,500
52	Alum.hydrox.	No growth					-
53	Mag.Hydrox. Alum.hydrox.	No growth					-
54	Alum.hydrox. Mag.Hydrox.	No growth					-
55	Dried Alum.hydrox Gel	No growth					-
56	Alum.hydrox. Mag.Hydrox.	⊖ve	-	-	-	-	43

Item No.	Active-Ingredient	Identification					Total aerobic microbial count /g.
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
57	Alum.hydrox. Gel			No growth			-
58	Dried.Alum.hydrox. Gel Mag.Trisil	⊖ ve	-	-	-	-	113,000
59	Dried Alum. hydrox. Gel	⊖ve	-	-	-	-	23
60	Alum. hydrox. Gel			No growth			-
61	Alum. hydrox. Gel			No growth			-
62	Alum. hydrox. Gel	⊖ve	-	-	-	-	343,500
63	Alum. hydrox. Gel	⊖ve	-	-	-	-	44,000
64	Alum. hydrox. Gel	⊖ve ⊖ve	-	-	-	-	43
65	Alum. hydrox. Gel			No growth			-
66	Alum. hydrox. Gel	⊖	-	-	-	-	240
67	Alum. hydrox. Gel	⊖ve	-	-	-	-	4

3.3 Antitussis & Expectorants

Most of the pharmaceutical preparations of anti-cough were in the form of mixture; even some dosage forms were in tablet. The package of mixture were usually from 30-120 ml in suitable containers.

The results of fourty seven tested samples were recorded in table 9, and twenty six samples of tablet form were shown in table 10.

Table 9 Identification and to total aerobic microbial count/ml of Antitussis and Expectorants.

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml.
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
1	Glyceryl Guaiacolate Amm.Chloride Phenylpropanolamine HCl	+ve	-	-	-	-	20
2	Ephedrine HCl Terpin Hydrate Dextromethorphan HBr		-	-	-	-	1,100
3	Chlorphen.Maleate Amm.Chloride Ephedrine HCl	+ve +ve	-	-	-	-	6
4	Spt.Amm. Arom Sod.Chloride		No growth				-
5	Dextromethorphan HBr Terpin Hydrate Glyceryl.Guaiacolate	+ve	-	-	-	-	240

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml.
		Gram bacillus	S.aureus	P.aeruginosa	E.coli.	Salmonella spp	
6	Menthol Cryst Lig.Tolu. Conc. Tr.Scillae. Tr.Camphor Co. Tr.Benzoin Co.	~~Ove~~	-	-	-	-	12
7	KI Amm.Chloride Pot.Guaiacolate		No growth				-
8.	Tr. Ipecac Spt. camphor Amm.Chloride		No growth				-
9	Dextromethorphan Ephedrine HCl Amm.Chloride		Penicillium spp.				3
10	Glyceryl Guaiacolate Amm.Chloride Phenylpropanolamine	~~Ove~~ ~~Ove~~	-	-	-	-	43
11	Dextromethorphan Diphenhydramine Amm.Chloride		No growth				-
12	Ephedrine HCl Terpin Hydrate Dextromethorphan		No growth				-

Item No.	Active Ingredients	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli.	Salmonella spp	
13	Amm.Chloride Ephedrine HCl		No growth				-
14	Ephedrine HCl Amm.Chloride Sod.Citrate		No growth				-
15	Amm.Chloride Ephedrine HCl Sod.Citrate		No growth				-
16	Syr.Tolu. Acid acetic acid Amm.Chloride		No growth				-
17	Amm.Chloride Sod.Citrate		No growth				-
18	Dextromethorphan HBr Ephedrine HCl Terpin Hydrate	+ve	-	-	-	-	4
19	Dextromethorphan Amm.Chloride Ephedrine HCl		No growth				-
20	Pot.Guaiacol Sulfonate Amm.Chloride		No growth				-
21	Diphenhydramine HCl Dextromethorphan Amm.Chloride		No growth				-

Item No.	Active Ingredient	Identification					Total aerobic microbial count
		Gram bacillus	S.aureus	P.aeruginosa	E.coli.	Salmonella spp	
22	N-Cyclohexyl, (-N- methyl -2- amino -3,5 dibromobenzyl) ammonium Chloride Pot. Guaiacolate		No growth				-
23	Diphenhydramine Glyceryl Guaiacolate Sod.Cit. Phenylpropanolamine HCl		No growth				-
24	Amm. Chloride Sod.Cit. Ephedrine HCl		No growth				-
25	Dextromethorphan HBr Ipecacuanha Liquid Extract.		No growth				-
26	Amm.Chloride Ephedrine HCl Pot.Guaiacol Sulfate	~~Gve~~	+	-	-	-	4
27	Dextromethorphan HBr Ephedrine HCl Terpine Hydrate	~~Gve~~	-	-	-	-	1,100
28	Amm.Chloride Sod.Cit.		No growth				-
29	N-Acetyl-P-amino phenol Phenylephrine HCl	~~Gve~~	-	-	-	-	460

Item No.	Active Ingredient	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aurus	P.aeruginosa	E.coli	Salmonella spp.	
30	Diphenhydramine HCl Amm.Chloride Sod.Citrate		No growth				-
31	Dextromethorphan HBr Sod.Cit.	-ve	-	-	-	-	4
32	Menthol (Cryst) liq.Tolu. Tr.Scillae Tr.Camphor	-ve	-	-	-	-	1,100
33	Calc.Cresol Sulfonate Tr. anis.	-ve	-	-	-	-	93
34	Dextromethorphan HBr Amm.Chloride Ephedrime HCl	-ve	-	-	-	-	1,500
35	Silentium Decamium Cetamium Sod.Cit	-ve	-	-	-	-	3
36	Glyceryl Guaiacolate		No growth				-
37	Camphorated. Opium Antimony Pot.Tartrate.		No growth				-
38	Amm.Chloride Phenylephrine HCl Sod.Cit.	-ve	-	-	-	-	4

Item No.	Active Ingredients	Identification					Total aerobic microbial count/ml
		Gram bacillus	S.aureus	P.aeruginosa	E.coli.	Salmonella spp	
39	Amm.Chloride Ephedrine HCl Tr.Ipecac.		No grwoth				-
40	Amm.Chloride Sod.Cit. Ephedrine HCl	~~Gve~~	-	-	-	-	43
41	Ephedrine HCl Terpin Hydrate Dextromethorphan HBr	~~Gve~~ ~~Gve~~	-	-	-	-	7
42	Dextromethorphan HBr Ephedrine HCl Pot.Guaiacol	~~Gve~~	-	-	-	-	39
43	Dextromethorphan HBr Ephedrine HCl Terpin Hydrate		No growth				-
44	Dextromethorphan HBr PhenyLephrine. HCl	~~Gve~~	-	-	-	-	4
45	Pot.Guaiacolsulfonate Amm.Chloride	~~Gve~~	-	-	-	-	24,150
46	Dextromethorphan HBr Amm.Chloride Ephedrine HCl		No growth				-
47	Ephedrine HCl Dextromethorphan HBr Amm.Chloride Sod.Cit.	~~Gve~~	-	-	-	-	4

Table 10. Identification and total aerobic microbial count/g of Antitussis

Item No.	Active Ingredient	Identification					Total aerobic microbial count/g
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
48	Dextromethorphan HBr Ephedrine HCl Terpin Hydrate	Ove Ove	-	-	-	-	240
49	Dextromethorphan HBr		No growth				-
50	Dextromethorphan HBr	Ove	-	-	-	-	460
51	Dextromethorphan HBr	Ove	-	-	-	-	93
52	Dextromethorphan HCl		No growth				-
53	Dextromethorphan HBr Terpin Hydrate Glyceryl Guaiacolate	Ove	-	-	-	-	9
54	Dextromethorphan HBr Guaiacol Carb. Terpin Hydrate		No growth				-
55	Dextromethorphan	Ove	-	-	-	-	460

Item No.	Active Ingredient.	Identification					Total aerobic microbial count/g
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
56	Dextromethorphan HBr Guaiacol Carb. Terpin Hydrate	Ove	-	-	-	-	93
57	Dextromethorphan HBr	Ove	-	-	-	-	460
58	Dextromethorphan HBr Ephedrine HCl Terpin Hydrate	Ove	-	-	-	-	460
59	Dextromethorphan HBr Phenylpropanolamine I Terpin Hydrate	Ove	-	-	-	-	7
60	Dextromethorphan	Ove	-	-	-	-	1,100
61	Sod.Ditertiary butylnaphthalene monosulfonate	Ove	-	-	-	-	460
62	Chlorpheniramine maleate Dextromethorphan HBr	Ove Ove	-	-	-	-	2,400
63	Dextromethorphan	Ove	-	-	-	-	43
64	Dextromethorphan HBr	Ove	-	-	-	-	460

Item No.	Active Ingredient	Identification					Total aerobic microbial count/g
		Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella Spp.	
65	Dextromethorphan HBr Guaiacol Carb. Terpin Hydrate	Ove	-	-	-	-	240
66	Dextromethorphan HBr Ephedrine HCl Terpin Hydrate			No growth			-
67	Dextromethorphan HBr			No growth			-
68	Dextromethorphan HBr Ephedrine HCl Terpin Hydrate	Ove	-	-	-	-	23,500
69	Dextromethorphen HBr	Ove	-	-	-	-	240
70	Glyceryl Guaiacolate Theophylline Ephedrine HCl	Ove	-	-	-	-	460
71	Dextromethorphan HBr	Ove	-	-	-	-	16
72	Dextromethorphan HBr Guaiacol Carb.	Ove Ove	-	-	-	-	1,100
73	Dextromethorphan HBr Ephedrine HCl Terpin Hydrate	Ove	-	-	-	-	4,900

3.4 Thai-native drugs

The finished product of Thai - native drugs from various dispensaries were in powder and compressed forms. The preparatory method was dried and pulverized crude drug into powder. The results were indicated in table 11

Table 11. Identification and total aerobic microbial count/g of Thai-native drugs

Item No.	Dosage form	Active Ingredient (Thai title)	Identification					Total aerobic microbial count/g
			Gram bacillus	S.aureus	P.aeruginosa	E.coli.	Salmonella spp.	
1	Powder	โกฐหัวบัว, การะบูน พิมเสน	⊕ve ⊖ve	-	-	-	-	107,000
2	Powder	บรเพ็ด, ขิงแห้ง	⊕ve ⊖ve	-	-	-	-	1,100
3	Powder	พริกไทยดำ, ดีปลี เกลือสินเธาว์	⊖ve	-	-	-	-	50,000
4	Powder	ผงชะเอม พริกไทยดำ	⊖ve	-	-	-	-	1,100
5	Powder	ดีปลี, ขิงแห้ง ผิวมะกรูด	⊖ve	-	-	-	-	596,000
6	Powder	กระดูกเสือ, ดอกจันทร อบเชยญวน	⊖ve	-	-	-	-	60,500

Item No.	Dosage form	Active Ingredient (Thai title)	Identification					Total aerobic microbial count/g
			Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
7	Powder	ลูกเบญจกานี น้ำประสานทองสตุ	⊕ve ⊖ve	-	-	-	-	16,360
8	Powder	เปราะหอม ,ฝางเสน จันทร์แดง	⊖ve	-	-	-	-	1,100
9	Powder	"—"—"	⊖ve ⊕ve	-	-	-	-	5,800
10	Powder	พิมเสน ,โกฏกระดูก กานพลู	⊕ve ⊖ve	-	-	-	-	48,500
11	Powder	กระดูกเสือ ดอกจันทร์ หางไหลแดง	⊕ve ⊖ve	-	-	-	-	184,000
12	Powder	ชะเอมเทศ ดอกจันทร์	⊖ve	-	-	-	-	22,500
13	Powder	ขิงแห้ง ลูกราชดัด โปลอกสมจีน	⊖ve	-	-	-	-	166,500
14	Powder	ใบชุมเห็ดไทย ใบฝักกระโดม ใบพิมเสน	⊖ve	-	-	-	-	310,000
15	Powder	ลูกกระดอม จันทร์เทศ	⊖ve	-	-	-	-	101,000
16	Powder	เทียนดำ วานนำ ดปล	⊖ve	-	-	-	-	761,000
17	Powder	โกฏเชียง อบเชยเทศ	⊖ve	-	-	-	-	47,500
18	Powder	พริกไทยดำ บรเพ เมลดฝาย	⊖ve	-	-	-	-	126,000

Item No.	Dosage form	Active Ingredient (Thai title)	Identification					Total aerobic microbial count/g
			Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonilla spp.	
19	Powder	ข่า, ไพล, ผิวมะกรูด	⊖ve	-	-	-	-	590,000
20	Powder	กฤษณาเนื้อไม้, เกษร-ทั้ง 5, ลูกกระวาน	⊖ve	-	-	-	-	213,500
21	Powder	โกฐเชียง, โสมเกาหลี	⊖ve	-	-	-	-	27,650
22	Powder	ชะเอมเทศ, พิมเสน	⊖ve	-	-	-	-	75,500
23	Powder	ระย่อม, ยาดำ ลูกสมุลเทศ	⊖ve	-	-	-	-	479,500
24	Powder	ใบพิมเสน, ผักกระโฉม	⊖ve ⊖ve	-	-	-	-	164,000
25	Powder	ใบพิมเสน, ใบสันพร้า-หอม	⊖ve	-	-	-	-	231,500
26	Powder	กระดูกเหลือม ลูกคำดีศีวาย	⊖ve	-	-	-	-	460
27	Powder	พริกไทยอ่อน วานน้ำ, ขิง	⊖ve	-	-	-	-	439,000
28	Powder	โกฐเชียง ลูกเรว, โกฐหัวบัว	⊖ve	-	-	-	-	198,000
29	Powder	วานน้ำ, ดีปลี กานพลู	⊖ve	-	-	-	-	167,000
30	Powder	ลูกซัด, จันทร์แดง ชะเอม	⊖ve	-	-	-	-	237,000
31	Powder	ดีปลี, ขิงแห้ง วานน้ำ	⊖ve	-	-	-	-	181,000

Item No.	Dosage form	Active Ingredient (Thai title)	Identification					Total aerobic microbial count/g
			Gram bacillus	S.aureus	P.aeruginosa	E.coli.	Salmonella spp.	
32	Paste	ระยอม, ยาดำ เปลือกฝางเสน	-ve	-	-	-	-	141,000
33	(Tab)	โกฐทั้ง 5, ระยอม เปลือกประดงขาว	-ve	-	-	-	-	501,500
34	"	ขิงแห้ง, เปลือกมะกา	-ve	-	-	-	-	83,500
35	"	โสมเกาหลี เปลือกสมจีน	-ve	-	-	-	-	1,100
36	"	โกฐสอ, ชะเอมเทศ	-ve +ve	-	-	-	-	192,500
37	"	ใบสันพร้านางนวล ดอกจันทร, ขิง	-ve -ve	-	-	-	-	71,000
38	"	โกฐทั้ง 5 , ยาดำ		No growth				
39	"	ระยอม, ยาดำ	-ve	-	-	-	-	88,500
40	"	ระยอม, แก่นขี้เหล็ก บรเพ็ด	-ve	-	-	-	-	201,500
41	"	โกฐทั้ง 5, พริกไทย-รอน	-ve	-	-	-	-	159,000
42	"	ขิง, ไพลแห้ง, ดีปลี บรเพ็ด	-ve	-	-	-	-	55,500

Item No.	Dosage form	Active Indredients (Thai Title)	Identification					Total aerobic microbial count/g
			Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
43	Tab.	ผงชะเอม, เปลือกพิศนาค บรเพ็ด	⊕ve	-	-	-	-	213,500
44	Tab.	ใบส้มพร้าหอม, อบเชย	⊕ve ⊕ve	-	-	-	-	26,000
45	Tab.	ผงชะเอม, บรเพ็ด	⊕ve	-	-	-	-	57,000
46	Tab.	เปลือกพิศนาค, เทียนทั้ง5	⊕ve	-	-	-	-	242,000
47	Tab.	อบเชยญวน ผงชะเอม	No growth					-
48	Tab.	ระยอม, ดีปลี	⊕ve	-	-	-	-	185,000
49	Tab.	โกฐสอ, โกฐน้ำเต้า ระยอม	⊕ve	-	-	-	-	146,000
50	Tab.	พิมเสน ลูกจันทร, ดอกพิกุล	⊕ve	-	-	-	-	372,000
51	Tab.	ผงชะเอม, อบเชยญวน	⊕ve	-	-	-	-	460
52	Tab.	โกฐทั้ง 5, พิมเสน อบเชยญวน	⊕ve	-	-	-	-	107,500
53	Tab.	ดอกจันทร์, ลูกกระวาน พริกไทย	⊕ve	-	-	-	-	246,500
54	Tab.	โกฐเขมา, ชะเอมเทศ	⊕ve	-	-	-	-	245,000

Item No.	Dosage form	Active Ingredient (Thai title)	Identification					Total aerobic microbial count/g
			Gram bacillus	S.aureus	P.aeruginosa	E.coli	Salmonella spp.	
55	Tab.	โกฐทั้ง 5, ขิงแห้ง, ขา	⊖ve	-	-	-	-	364,500
56	Tab.	โกฐกระดูก, โกฐสอ โกฐน้ำเต้า	⊖ve	-	-	-	-	142,000
57	Tab.	บรเพ็ด เปลือกพิศนาค	⊕ve ⊖ve	-	-	-	-	190,500
58	Tab.	อบเชย, โกฐสอ	⊖ve	-	-	-	-	138,000
59	Tab.	โกฐทั้ง 5, พิศนาค	⊖ve	-	-	-	-	298,500
60	Tab.	บรเพ็ด, ไพล, อบเชยญวน	⊖ve	-	-	-	-	24,000
61	Tab.	กานพลู, เปลือกตะโกนา บรเพ็ด		-	-	-	-	48,500
62	Tab.	ระย่อม, เจตพังคี	⊖ve	-	-	-	-	71,500
63	Tab.	ยาดำ, โกฐทั้ง 5	No growth					-
64	Tab.	โกฐกระดูก, ยาดำ, สมอไทย	⊖ve	-	-	-	-	86,000
65	Tab.	โกฐเขมา, โกฐกระดูก เมล็ดงาแห้ง	⊖ve	-	-	-	-	11,000
66	Tab.	โกฐสอ, โกฐเขมา, ยาดำ, ใบกระพังโหม	⊖ve	-	-	-	-	117,000

Percentage Contamination of non-pathogenic microorganisms from total tested samples.

Table 12 Chloramphenicol palmitate syrup

Total no. of samples	Results	No.of growth	% total
55	no growth	18	63.64
	growth $< 10^2$	17	
	" $> 10^2$	7	36.36
	" $> 10^3$	5	
	" $> 10^4$	5	
	" $> 10^5$	3	

Table 13 Aluminum hydroxide Gel (Suspension Antacids)

Total no. of samples	Results	No. of growth	% tatal
44	no growth	14	45.50
	growth < 10^2	6	
	" > 10^2	3	54.50
	" > 10^3	6	
	" > 10^4	10	
	" > 10^5	5	

Table 14 Dried Aluminum hydroxide Gel Tablets (Tablet Antacids)

Total no. of samples	Results	No.of growth	% total
23	no growth	11	73.90
	growth < 10^2	6	
	" > 10^2	2	26.10
	" > 10^3	-	
	" > 10^4	1	
	" > 10^5	3	

Table 15 Antitussis and Expectorant syrup.

Total no. of samples	Results	No of growth	% total
47	no growth	24	85.11
	growth $< 10^2$	16	
	" $> 10^2$	2	14.89
	" $> 10^3$	4	
	" $> 10^4$	1	
	" $> 10^5$	-	

Table 16 Antitassis and Expectorant tablets.

Total no. of samples	Results	No. of growth	% total
26	no growth	5	46.15
	growth $< 10^2$	7	
	" $> 10^2$	9	53.85
	" $> 10^3$	4	
	" $> 10^4$	1	
	" $> 10^5$	-	

Table 17 Thai - native drugs

Total No. of samples	Results	No.of growth	% total
66	No growth	3	4.50
	growth $< 10^2$	-	
	" $> 10^2$	2	95.50
	" $> 10^3$	5	
	" $> 10^4$	19	
	" $> 10^5$	37	

< = less than

> = greater than