

Appendix E

Intralaboratory Coefficient of Variation (CV) Analysis of BCOP

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Appendix E1

BCOP Data from Southee (1998)

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**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
Ammonium nitrate - Lab 1 (1)	1	100%	6.0	0.078	7.2	
	2		2.0	0.022	2.3	
	3		5.0	0.011	5.2	
	mean		4.3	0.037	4.9	
	SD		2.1	0.036	2.5	
	%CV		48.0	97.1	50.3	
Ammonium nitrate - Lab 1 (2)	1	100%	5.7	0.038	6.3	
	2		5.7	0.094	7.1	
	3		3.7	0.045	4.4	
	mean		5.0	0.059	5.9	
	SD		1.2	0.031	1.4	
	%CV		22.9	51.7	23.4	
Ammonium nitrate - Lab 2 (1)	1	100%	2.3	0.123	4.1	
	2		2.3	0.221	5.6	
	3		0.3	0.116	2.0	
	mean		1.6	0.153	3.9	
	SD		1.2	0.059	1.8	
	%CV		70.7	38.3	46.4	
Ammonium nitrate - Lab 2 (2)	1	100%	1.7	0.057	2.6	
	2		1.7	0.139	3.8	
	3		2.7	0.126	4.6	
	mean		2.0	0.107	3.7	
	SD		0.6	0.044	1.0	
	%CV		28.4	41.1	27.5	
Ammonium nitrate - Lab 3 (1)	1	100%	4.0	0.126	5.9	
	2		3.0	0.111	4.7	
	3		4.0	0.063	4.9	
	mean		3.7	0.100	5.2	
	SD		0.6	0.033	0.6	
	%CV		15.7	32.9	12.4	
Ammonium nitrate - Lab 3 (2)	1	100%	4.0	0.191	6.9	
	2		4.0	0.078	5.2	
	3		5.0	0.207	8.1	
	mean		4.3	0.159	6.7	
	SD		0.6	0.070	1.5	
	%CV		13.3	44.3	21.6	
Benzalkonium chloride - Lab 1 (1)	1	100%	79.7	8.005	199.8	
	2		85.7	7.850	203.5	
	3		86.7	6.370	182.3	
	mean		84.0	7.408	195.2	
	SD		3.8	0.903	11.3	
	%CV		4.5	12.2	5.8	
Benzalkonium chloride - Lab 1 (2)	1	100%	89.3	3.326	139.2	
	2		84.3	3.519	137.1	
	3		83.3	3.070	129.4	
	mean		85.6	3.305	135.2	
	SD		3.2	0.225	5.2	
	%CV		3.8	6.8	3.8	
Benzalkonium chloride - Lab 1 (3)	1	100%	83.0	3.708	138.6	
	2		80.0	3.989	139.8	
	3		83.0	3.490	135.4	
	mean		82.0	3.729	137.9	
	SD		1.7	0.250	2.3	
	%CV		2.1	6.709	1.6	
Benzalkonium chloride - Lab 1 (4)	1	100%	82.0	5.8	168.6	
	2		82.0	3.539	135.1	
	3		91.0	4.987	165.8	
	mean		85.0	4.766	156.5	
	SD		5.2	1.132	18.6	
	%CV		6.1	23.8	11.9	
Benzalkonium chloride - Lab 1 (5)	1	100%	89.7	3.229	138.1	
	2		86.7	3.415	137.9	
	3		86.7	3.418	138.0	
	mean		87.7	3.354	138.0	
	SD		1.7	0.108	0.1	
	%CV		2.0	3.2	0.1	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	In Vitro Score ¹	Prediction
Benzalkonium chloride - Lab 2 (1)	1	100%	95.0	3.919	153.8	
	2		80.0	4.237	143.6	
	3		89.0	5.122	165.8	
	mean		88.0	4.426	154.4	
	SD		7.5	0.623	11.1	
	%CV		8.6	14.1	7.2	
Benzalkonium chloride - Lab 2 (2)	1	100%	106.3	4.780	178.0	
	2		91.3	3.459	143.2	
	3		86.3	4.205	149.4	
	mean		94.6	4.148	156.9	
	SD		10.4	0.662	18.6	
	%CV		11.0	16.0	11.8	
Benzalkonium chloride - Lab 2 (3)	1	100%	86.0	4.324	150.9	
	2		80.0	4.246	143.7	
	3		95.0	4.187	157.8	
	mean		87.0	4.252	150.8	
	SD		7.5	0.069	7.1	
	%CV		8.7	1.6	4.7	
Benzalkonium chloride - Lab 2 (4)	1	100%	96.0	4.512	163.7	
	2		93.0	5.200	171.0	
	3		90.0	3.123	136.8	
	mean		93.0	4.278	157.2	
	SD		3.0	1.058	18.0	
	%CV		3.2	24.7	11.5	
Benzalkonium chloride - Lab 2 (5)	1	100%	97.0	4.035	157.5	
	2		97.0	4.296	161.4	
	3		101.0	3.584	154.8	
	mean		98.3	3.972	157.9	
	SD		2.3	0.360	3.3	
	%CV		2.3	9.1	2.1	
Benzalkonium chloride - Lab 3 (1)	1	100%	96.7	3.842	154.3	
	2		98.7	5.102	175.2	
	3		94.7	3.102	141.2	
	mean		96.7	4.015	156.9	
	SD		2.0	1.011	17.1	
	%CV		2.1	25.2	10.9	
Benzalkonium chloride - Lab 3 (2)	1	100%	106.3	3.321	156.1	
	2		86.3	6.381	182.0	
	3		85.3	4.456	152.1	
	mean		92.6	4.719	163.4	
	SD		11.8	1.547	16.2	
	%CV		12.8	32.8	9.9	
Benzalkonium chloride - Lab 3 (3)	1	100%	101.0	4.364	166.5	
	2		102.0	3.974	161.6	
	3		112.0	4.609	181.1	
	mean		105.0	4.316	169.7	
	SD		6.1	0.320	10.1	
	%CV		5.8	7.4	6.0	
Benzalkonium chloride - Lab 3 (4)	1	100%	99.3	3.727	155.2	
	2		91.3	5.637	175.9	
	3		95.3	4.127	157.2	
	mean		95.3	4.497	162.8	
	SD		4.0	1.007	11.4	
	%CV		4.2	22.4	7.0	
Benzalkonium chloride - Lab 3 (5)	1	100%	84.0	3.993	143.9	
	2		97.0	4.153	159.3	
	3		96.0	3.698	151.5	
	mean		92.3	3.948	151.6	
	SD		7.2	0.231	7.7	
	%CV		7.8	5.8	5.1	
Hexadecyl trimethyl ammonium bromide - Lab 1 (1)	1	10%	15.3	0.968	29.8	
	2		11.3	0.512	19.0	
	3		13.3	0.481	20.5	
	mean		13.3	0.654	23.1	
	SD		2.0	0.273	5.9	
	%CV		15.0	41.7	25.3	
Hexadecyl trimethyl ammonium bromide - Lab 1 (2)	1	10%	13.0	0.569	21.5	
	2		11.0	0.554	19.3	
	3		5.0	0.374	19.3	
	mean		9.7	0.499	20.0	
	SD		4.2	0.109	1.3	
	%CV		43.1	21.7	6.3	
Hexadecyl trimethyl ammonium bromide - Lab 2 (1)	1	10%	16.0	1.970	45.6	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
	2		10.0	0.771	21.6	
	3		15.0	1.454	36.8	Moderate
	mean		13.7	1.398	34.7	
	SD		3.2	0.601	12.1	
	%CV		23.5	43.0	35.0	
Hexadecy trimethyl ammonium bromide - Lab 2 (2)	1	10%	16.0	1.572	39.6	
	2		15.0	2.686	55.3	
	3		8.0	0.970	22.6	Moderate
	mean		13.0	1.743	39.2	
	SD		4.4	0.871	16.4	
	%CV		33.5	50.0	41.8	
Hexadecy trimethyl ammonium bromide - Lab 3 (1)	1	10%	18.3	0.988	33.1	
	2		16.3	0.846	29.0	
	3		17.3	1.039	32.9	Moderate
	mean		17.3	0.958	31.7	
	SD		1.0	0.100	2.3	
	%CV		5.8	10.4	7.3	
Hexadecy trimethyl ammonium bromide - Lab 3 (2)	1	10%	17.0	0.537	25.1	
	2		16.0	0.402	22.0	Moderate
	3		20.0	1.515	42.7	
	mean		17.7	0.818	29.9	
	SD		2.1	0.607	11.2	
	%CV		11.8	74.3	37.3	
Ethanol - Lab 1 (1)	1	100%	16.3	1.227	34.7	
	2		20.3	1.534	43.3	Moderate
	3		16.3	1.034	31.8	
	mean		17.6	1.265	36.6	
	SD		2.3	0.252	6.0	
	%CV		13.1	19.9	16.3	
Ethanol - Lab 1 (2)	1	100%	22.7	1.753	49.0	
	2		13.7	1.502	36.2	Moderate
	3		12.7	0.990	27.6	
	mean		16.4	1.415	37.6	
	SD		5.5	0.389	10.8	
	%CV		33.7	27.5	28.6	
Ethanol - Lab 1 (3)	1	100%	15.0	1.325	34.9	
	2		12.0	0.703	22.5	Moderate
	3		14.0	1.157	31.4	
	mean		13.7	1.062	29.6	
	SD		1.5	0.322	6.4	
	%CV		11.2	30.3	21.6	
Ethanol - Lab 1 (4)	1	100%	11.7	2.259	45.6	
	2		13.7	2.050	44.5	Moderate
	3		12.7	1.491	35.1	
	mean		12.7	1.933	41.7	
	SD		1.0	0.397	5.8	
	%CV		7.9	20.5	13.8	
Ethanol - Lab 1 (5)	1	100%	13.0	0.987	27.8	
	2		14.0	1.084	30.3	Moderate
	3		17.0	1.303	36.5	
	mean		14.7	1.125	31.5	
	SD		2.1	0.162	4.5	
	%CV		14.2	14.4	14.2	

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Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
Ethanol - Lab 2 (1)	1	100%	14.3	1.576	37.9	Moderate
	2		12.3	3.163	59.7	
	3		13.3	3.138	60.4	
	mean		13.3	2.626	52.7	
	SD		1.0	0.909	12.8	
	%CV		7.5	34.6	24.3	
Ethanol - Lab 2 (2)	1	100%	18.3	1.979	48.0	Severe
	2		18.3	2.231	51.8	
	3		14.3	3.303	63.8	
	mean		17.0	2.504	54.5	
	SD		2.3	0.703	8.2	
	%CV		13.6	28.1	15.1	
Ethanol - Lab 2 (3)	1	100%	22.0	2.511	59.7	Severe
	2		13.0	3.821	70.3	
	3		14.0	2.743	55.1	
	mean		16.3	3.025	61.7	
	SD		4.9	0.699	7.8	
	%CV		30.2	23.1	12.6	
Ethanol - Lab 2 (4)	1	100%	19.0	3.106	65.6	Severe
	2		16.0	2.859	58.9	
	3		17.0	2.606	56.1	
	mean		17.3	2.857	60.2	
	SD		1.5	0.250	4.9	
	%CV		8.8	8.8	8.1	
Ethanol - Lab 2 (5)	1	100%	14.0	2.444	50.7	Moderate
	2		13.0	3.126	59.9	
	3		17.0	2.339	52.1	
	mean		14.7	2.636	54.2	
	SD		2.1	0.427	5.0	
	%CV		14.2	16.2	9.1	
Ethanol - Lab 3 (1)	1	100%	18.3	0.853	31.1	Moderate
	2		17.3	2.756	58.6	
	3		14.3	2.471	51.4	
	mean		16.6	2.027	47.0	
	SD		2.1	1.026	14.3	
	%CV		12.5	50.6	30.3	
Ethanol - Lab 3 (2)	1	100%	16.3	1.866	44.3	Moderate
	2		21.3	1.761	47.7	
	3		16.3	1.866	44.3	
	mean		18.0	1.831	45.4	
	SD		2.9	0.061	2.0	
	%CV		16.1	3.3	4.3	
Ethanol - Lab 3 (3)	1	100%	17.3	1.726	43.2	Moderate
	2		18.3	1.592	42.2	
	3		22.3	1.701	47.8	
	mean		19.3	1.673	44.4	
	SD		2.6	0.071	3.0	
	%CV		13.7	4.3	6.7	
Ethanol - Lab 3 (4)	1	100%	19.0	1.301	38.5	Moderate
	2		23.0	1.374	43.6	
	3		24.0	2.073	55.1	
	mean		22.0	1.583	45.7	
	SD		2.6	0.426	8.5	
	%CV		12.0	26.9	18.6	
Ethanol - Lab 3 (5)	1	100%	18.3	2.700	58.8	Moderate
	2		17.3	2.515	55.0	
	3		20.3	1.970	49.9	
	mean		18.6	2.395	54.6	
	SD		1.5	0.380	4.5	
	%CV		8.2	15.8	8.2	
Imidazole - Lab 1 (1)	1	100%	89.0	3.312	138.7	Severe
	2		93.0	3.325	142.9	
	3		92.0	3.501	144.5	
	mean		91.3	3.379	142.0	
	SD		2.1	0.106	3.0	
	%CV		2.3	3.1	2.1	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
Imidazole - Lab 1 (2)	1	100%	95.0	2.629	134.4	
	2		89.0	3.760	145.0	Severe
	3		80.0	3.528	132.9	
	mean		88.0	3.306	137.4	
	SD		7.5	0.597	6.6	
	%CV		8.6	18.1	4.8	
Imidazole - Lab 1 (3)	1	100%	62.7	1.940	91.8	
	2		75.7	1.963	105.1	Severe
	3		82.7	3.792	139.6	
	mean		73.7	2.565	112.2	
	SD		10.1	1.063	24.7	
	%CV		13.8	41.4	22.0	
Imidazole - Lab 1 (4)	1	100%	94.7	2.141	126.8	
	2		87.7	2.664	127.7	Severe
	3		75.7	4.213	138.9	
	mean		86.0	3.006	131.1	
	SD		9.6	1.078	6.7	
	%CV		11.2	35.8	5.1	
Imidazole - Lab 1 (5)	1	100%	114.7	2.972	159.3	
	2		85.7	3.390	136.6	Severe
	3		90.7	3.361	141.1	
	mean		97.0	3.241	145.7	
	SD		15.5	0.233	12.0	
	%CV		16.0	7.2	8.3	
Imidazole - Lab 2 (1)	1	100%	88.7	3.831	146.2	
	2		74.7	3.227	123.1	Severe
	3		93.7	3.412	144.9	
	mean		85.7	3.490	138.1	
	SD		9.8	0.309	13.0	
	%CV		11.5	8.9	9.4	
Imidazole - Lab 2 (2)	1	100%	95.0	3.032	140.5	
	2		96.0	3.715	151.7	Severe
	3		73.0	3.666	128.0	
	mean		88.0	3.471	140.1	
	SD		13.0	0.381	11.9	
	%CV		14.8	11.0	8.5	
Imidazole - Lab 2 (3)	1	100%	86.3	2.539	124.4	
	2		92.3	3.357	142.7	Severe
	3		80.3	3.825	137.7	
	mean		86.3	3.240	134.9	
	SD		6.0	0.651	9.5	
	%CV		7.0	20.1	7.0	
Imidazole - Lab 2 (4)	1	100%	86.3	4.085	147.6	
	2		101.3	3.416	152.5	Severe
	3		89.3	5.471	171.4	
	mean		92.3	4.324	157.2	
	SD		7.9	1.048	12.6	
	%CV		8.6	24.2	8.0	
Imidazole - Lab 2 (5)	1	100%	106.7	2.583	145.4	
	2		82.7	3.371	133.3	Severe
	3		74.7	3.969	134.2	
	mean		88.0	3.308	137.6	
	SD		16.7	0.695	6.7	
	%CV		18.9	21.0	4.9	
Imidazole - Lab 3 (1)	1	100%	73.0	3.756	129.3	
	2		76.0	2.956	120.3	Severe
	3		100.0	4.611	169.2	
	mean		83.0	3.774	139.6	
	SD		14.8	0.828	26.0	
	%CV		17.8	21.9	18.6	
Imidazole - Lab 3 (2)	1	100%	89.0	2.625	128.4	
	2		84.0	3.070	130.1	Severe
	3		102.0	4.000	162.0	
	mean		91.7	3.232	140.2	
	SD		9.3	0.702	18.9	
	%CV		10.1	21.7	13.5	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	In Vitro Score ¹	Prediction
Imidazole - Lab 3 (3)	1	100%	77.7	3.604	131.8	Severe
	2		83.7	2.339	118.8	
	3		79.7	2.779	121.4	
	mean		80.4	2.907	124.0	
	SD		3.1	0.642	6.9	
	%CV		3.8	22.1	5.5	
Imidazole - Lab 3 (4)	1	100%	80.0	3.721	135.8	Severe
	2		84.0	3.106	130.6	
	3		83.0	2.451	119.8	
	mean		82.3	3.093	128.7	
	SD		2.1	0.635	8.2	
	%CV		2.5	20.5	6.3	
Imidazole - Lab 3 (5)	1	100%	68.3	2.741	109.4	Severe
	2		77.3	2.976	121.9	
	3		84.3	3.636	138.8	
	mean		76.6	3.118	123.4	
	SD		8.0	0.464	14.8	
	%CV		10.5	14.9	12.0	
NaOH - Lab 1 (1)	1	10%	190.7	5.354	271.0	Severe
	2		140.7	4.895	214.1	
	3		198.7	3.404	249.8	
	mean		176.7	4.551	245.0	
	SD		31.4	1.019	28.8	
	%CV		17.8	22.4	11.7	
NaOH - Lab 1 (2)	1	10%	171.0	3.483	223.2	Severe
	2		174.0	3.660	228.9	
	3		171.0	3.885	229.3	
	mean		172.0	3.676	227.1	
	SD		1.7	0.201	3.4	
	%CV		1.0	5.5	1.5	
NaOH - Lab 2 (1)	1	10%	189.0	4.228	252.4	Severe
	2		173.0	4.650	242.8	
	3		148.0	5.386	228.8	
	mean		170.0	4.755	241.3	
	SD		20.7	0.586	11.9	
	%CV		12.2	12.3	4.9	
NaOH - Lab 2 (2)	1	10%	180.0	4.122	241.8	Severe
	2		155.0	4.836	227.5	
	3		165.0	4.812	237.2	
	mean		166.7	4.590	235.5	
	SD		12.6	0.405	7.3	
	%CV		7.5	8.8	3.1	
NaOH - Lab 3 (1)	1	10%	139.0	5.039	214.6	Severe
	2		121.0	4.339	186.1	
	3		112.0	4.434	178.5	
	mean		124.0	4.604	193.1	
	SD		13.7	0.380	19.0	
	%CV		11.1	8.2	9.9	
NaOH - Lab 3 (2)	1	10%	149.3	3.535	202.3	Severe
	2		189.3	2.855	232.1	
	3		157.3	3.520	210.1	
	mean		165.3	3.303	214.8	
	SD		21.2	0.388	15.5	
	%CV		12.8	11.8	7.2	
Sodium oxalate - Lab 1 (1)	1	100%	-2.0	0.112	-0.3	Mild
	2		-2.0	0.020	-1.7	
	3		1.0	0.017	1.3	
	mean		-1.0	0.050	-0.2	
	SD		1.7	0.054	1.5	
	%CV		-173.2	108.7	-643.3	
Sodium oxalate - Lab 1 (2)	1	100%	-0.3	0.067	0.7	Mild
	2		-3.3	0.055	-2.5	
	3		0.7	0.044	1.4	
	mean		-1.0	0.055	-0.1	
	SD		2.1	0.012	2.1	
	%CV		-215.3	20.8	-1559.4	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
Sodium oxalate - Lab 2 (1)	1	100%	7.7	0.127	9.6	Mild
	2		7.7	0.112	9.4	
	3		9.7	0.144	11.9	
	mean		8.4	0.128	10.3	
	SD		1.2	0.016	1.4	
	%CV		13.8	12.5	13.5	
Sodium oxalate - Lab 2 (2)	1	100%	3.7	0.069	4.7	Mild
	2		2.7	0.044	3.4	
	3		3.7	0.099	5.2	
	mean		3.4	0.071	4.4	
	SD		0.6	0.028	0.9	
	%CV		17.1	39.0	21.0	
Sodium oxalate - Lab 3 (1)	1	100%	1.3	0.032	1.8	Mild
	2		2.3	0.088	3.6	
	3		2.3	0.032	2.8	
	mean		2.0	0.051	2.7	
	SD		0.6	0.032	0.9	
	%CV		29.4	63.8	33.0	
Sodium oxalate - Lab 3 (2)	1	100%	3.3	0.174	5.9	Mild
	2		2.3	0.145	4.5	
	3		1.3	0.130	3.3	
	mean		2.3	0.150	4.6	
	SD		1.0	0.022	1.3	
	%CV		43.5	14.9	28.5	
Parafluoroaniline - Lab 1 (1)	1	100%	15.0	1.777	41.7	Moderate
	2		14.0	1.965	43.5	
	3		11.0	1.248	29.7	
	mean		13.3	1.663	38.3	
	SD		2.1	0.372	7.5	
	%CV		15.6	22.4	19.6	
Parafluoroaniline - Lab 1 (2)	1	100%	13.3	0.908	26.9	Moderate
	2		21.3	1.970	50.9	
	3		13.3	1.419	34.6	
	mean		16.0	1.432	37.5	
	SD		4.6	0.531	12.3	
	%CV		28.9	37.081	32.7	
Parafluoroaniline - Lab 2 (1)	1	100%	14.3	0.930	28.3	Moderate
	2		16.3	1.521	39.1	
	3		15.3	0.681	25.5	
	mean		15.3	1.044	31.0	
	SD		1.0	0.431	7.2	
	%CV		6.5	41.3	23.2	
Parafluoroaniline - Lab 2 (2)	1	100%	14.3	0.922	28.1	Moderate
	2		20.3	1.332	40.3	
	3		14.3	1.476	36.4	
	mean		16.3	1.243	34.9	
	SD		3.5	0.287	6.2	
	%CV		21.3	23.1	17.8	
Parafluoroaniline - Lab 3 (1)	1	100%	11.0	0.913	24.7	Mild
	2		10.0	0.626	19.4	
	3		12.0	0.674	22.1	
	mean		11.0	0.738	22.1	
	SD		1.0	0.154	2.7	
	%CV		9.1	20.8	12.0	
Parafluoroaniline - Lab 3 (2)	1	100%	14.7	0.665	24.7	Moderate
	2		14.7	0.573	23.3	
	3		16.7	0.868	29.7	
	mean		15.4	0.702	25.9	
	SD		1.2	0.151	3.4	
	%CV		7.5	21.5	13.0	
Sodium lauryl sulfate - Lab 1 (1)	1	15%	0.7	0.596	9.6	Mild
	2		-0.3	0.933	13.7	
	3		1.7	1.507	24.3	
	mean		0.7	1.012	15.9	
	SD		1.0	0.461	7.6	
	%CV		142.9	45.5	47.8	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
Sodium lauryl sulfate - Lab 1 (2)	1	15%	0.7	0.998	15.7	Mild
	2		1.7	1.163	19.1	
	3		0.7	1.096	17.1	
	mean		1.0	1.086	17.3	
	SD		0.6	0.083	1.7	
	%CV		55.9	7.6	9.9	
Sodium lauryl sulfate - Lab 2 (1)	1	15%	-0.7	0.391	5.2	Mild
	2		-0.7	0.436	5.8	
	3		-0.7	0.398	5.3	
	mean		-0.7	0.408	5.4	
	SD		0.0	0.024	0.3	
	%CV		0.0	5.9	5.9	
Sodium lauryl sulfate - Lab 2 (2)	1	15%	0.3	0.157	2.7	Mild
	2		-0.7	0.367	4.8	
	3		0.3	0.519	8.1	
	mean		0.0	0.348	5.2	
	SD		0.6	0.182	2.7	
	%CV		-1732.1	52.3	52.3	
Sodium lauryl sulfate - Lab 3 (1)	1	15%	1.0	0.567	9.5	Mild
	2		0.0	0.594	8.9	
	3		1.0	0.392	6.9	
	mean		0.7	0.518	8.4	
	SD		0.6	0.110	1.4	
	%CV		86.6	21.2	16.1	
Sodium lauryl sulfate - Lab 3 (2)	1	15%	2.0	0.354	7.3	Mild
	2		1.0	0.230	4.5	
	3		1.0	0.266	5.0	
	mean		1.3	0.283	5.6	
	SD		0.6	0.064	1.5	
	%CV		43.3	22.5	26.7	
Butyl cellusolve - Lab 1 (1)	1	100%	31.3	5.071	107.4	
	2		29.3	3.548	82.5	
	3		28.3	4.020	88.6	
	mean		29.6	4.213	92.8	
	SD		1.5	0.780	13.0	
	%CV		5.2	18.5	14.0	
Butyl cellusolve - Lab 1 (2)	1	100%	30.0	5.013	105.2	Severe
	2		30.0	5.036	105.5	
	3		34.0	3.528	86.9	
	mean		31.3	4.526	99.2	
	SD		2.3	0.864	10.7	
	%CV		7.4	19.1	10.7	
Butyl cellusolve - Lab 2 (1)	1	100%	41.3	5.148	118.5	Severe
	2		45.3	4.490	112.7	
	3		30.3	4.236	93.8	
	mean		39.0	4.625	108.3	
	SD		7.8	0.471	12.9	
	%CV		19.9	10.2	11.9	
Butyl cellusolve - Lab 2 (2)	1	100%	38.3	4.829	110.7	
	2		45.3	4.106	106.9	
	3		45.3	4.832	117.8	
	mean		43.0	4.589	111.8	
	SD		4.0	0.418	5.5	
	%CV		9.4	9.1	4.9	
Butyl cellusolve - Lab 3 (1)	1	100%	36.7	3.490	89.1	Severe
	2		37.7	4.865	110.7	
	3		38.7	3.085	85.0	
	mean		37.7	3.813	94.9	
	SD		1.0	0.933	13.8	
	%CV		2.7	24.5	14.5	
Butyl cellusolve - Lab 3 (2)	1	100%	30.7	3.474	82.8	Severe
	2		40.7	3.204	88.8	
	3		41.7	5.414	122.9	
	mean		37.7	4.031	98.2	
	SD		6.1	1.206	21.6	
	%CV		16.1	29.9	22.0	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
4-Carboxybenzaldehyde - Lab 1 (1)	1	100%	50.0	0.036	50.5	Moderate
	2		44.0	0.040	44.6	
	3		45.0	0.074	46.1	
	mean		46.3	0.050	47.1	
	SD		3.2	0.021	3.1	
	%CV		6.9	41.8	6.5	
4-Carboxybenzaldehyde - Lab 1 (2)	1	100%	44.7	0.044	45.4	Moderate
	2		49.7	0.057	50.6	
	3		44.7	0.072	45.8	
	mean		46.4	0.058	47.3	
	SD		2.9	0.014	2.9	
	%CV		6.2	24.3	6.1	
4-Carboxybenzaldehyde - Lab 2 (1)	1	100%	57.7	0.022	58.0	Moderate
	2		54.7	-0.001	54.7	
	3		48.7	0.016	48.9	
	mean		53.7	0.012	53.9	
	SD		4.6	0.012	4.6	
	%CV		8.5	96.7	8.6	
4-Carboxybenzaldehyde - Lab 2 (2)	1	100%	49.7	0.000	49.7	Moderate
	2		49.7	0.001	49.7	
	3		43.7	0.004	43.8	
	mean		47.7	0.002	47.7	
	SD		3.5	0.002	3.4	
	%CV		7.3	124.9	7.1	
4-Carboxybenzaldehyde - Lab 3 (1)	1	100%	37.3	0.031	37.8	Moderate
	2		42.3	0.003	42.3	
	3		46.3	0.005	46.4	
	mean		42.0	0.013	42.2	
	SD		4.5	0.016	4.3	
	%CV		10.7	120.2	10.2	
4-Carboxybenzaldehyde - Lab 3 (2)	1	100%	45.3	0.030	45.8	Moderate
	2		37.3	0.041	37.9	
	3		41.3	0.035	41.8	
	mean		41.3	0.035	41.8	
	SD		4.0	0.006	4.0	
	%CV		9.7	15.6	9.4	
Methyl ethyl ketone - Lab 1 (1)	1	100%	64.3	2.734	105.3	Severe
	2		59.3	2.640	98.9	
	3		59.3	4.174	121.9	
	mean		61.0	3.183	108.7	
	SD		2.9	0.860	11.9	
	%CV		4.7	27.0	10.9	
Methyl ethyl ketone - Lab 1 (2)	1	100%	54.3	1.909	82.9	Severe
	2		65.3	2.155	97.6	
	3		66.3	3.880	124.5	
	mean		62.0	2.648	101.7	
	SD		6.7	1.074	21.1	
	%CV		10.7	40.6	20.8	
Methyl ethyl ketone - Lab 2 (1)	1	100%	45.3	1.658	70.2	Severe
	2		54.3	2.408	90.4	
	3		43.3	1.052	59.1	
	mean		47.6	1.706	73.2	
	SD		5.9	0.679	15.9	
	%CV		12.3	39.8	21.7	
Methyl ethyl ketone - Lab 2 (2)	1	100%	46.3	0.989	61.1	Severe
	2		50.3	1.386	71.1	
	3		47.3	1.584	71.1	
	mean		48.0	1.320	67.8	
	SD		2.1	0.303	5.8	
	%CV		4.3	23.0	8.5	
Methyl ethyl ketone - Lab 3 (1)	1	100%	55.0	1.277	74.2	Severe
	2		51.0	1.218	69.3	
	3		61.0	0.420	67.3	
	mean		55.7	0.972	70.3	
	SD		5.0	0.479	3.6	
	%CV		9.0	49.3	5.1	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
Methyl ethyl ketone - Lab 3 (2)	1	100%	55.7	1.227	74.1	Severe
	2		52.7	0.947	66.9	
	3		54.7	1.660	79.6	
	mean		54.4	1.278	73.5	
	SD		1.5	0.359	6.4	
	%CV		2.8	28.1	8.7	
TritonX100 - Lab 1 (1)	1	5%	1.7	0.388	7.5	Mild
	2		0.7	0.158	3.1	
	3		1.7	0.347	6.9	
	mean		1.4	0.298	5.8	
	SD		0.6	0.123	2.4	
	%CV		42.2	41.2	40.9	
TritonX100 - Lab 1 (2)	1	5%	0.7	0.162	3.1	Mild
	2		-0.3	0.191	2.6	
	3		-0.3	0.324	4.6	
	mean		0.0	0.226	3.4	
	SD		0.6	0.086	1.0	
	%CV		1732.1	38.3	30.3	
TritonX100 - Lab 2 (1)	1	5%	3.3	0.025	3.7	Mild
	2		4.3	0.026	4.7	
	3		2.3	0.019	2.6	
	mean		3.3	0.023	3.7	
	SD		1.0	0.004	1.1	
	%CV		30.3	16.2	28.6	
TritonX100 - Lab 2 (2)	1	5%	0.3	0.040	0.9	Mild
	2		2.3	0.036	2.8	
	3		1.3	0.029	1.7	
	mean		1.3	0.035	1.8	
	SD		1.0	0.006	1.0	
	%CV		76.9	15.9	53.0	
TritonX100 - Lab 3 (1)	1	5%	3.7	0.033	4.2	Mild
	2		1.7	0.015	1.9	
	3		2.7	0.021	3.0	
	mean		2.7	0.023	3.0	
	SD		1.0	0.009	1.2	
	%CV		37.0	39.8	37.9	
TritonX100 - Lab 3 (2)	1	5%	0.7	0.035	1.2	Mild
	2		1.7	0.052	2.5	
	3		2.7	0.027	2.1	
	mean		1.7	0.038	1.9	
	SD		1.0	0.013	0.7	
	%CV		58.8	33.6	34.4	
Propyl-4-hydroxybenzoate - Lab 1 (1)	1	100%	4.0	0.006	4.1	Mild
	2		4.0	0.007	4.1	
	3		7.0	0.027	7.4	
	mean		5.0	0.013	5.2	
	SD		1.7	0.012	1.9	
	%CV		34.6	88.8	36.6	
Propyl-4-hydroxybenzoate - Lab 1 (2)	1	100%	4.7	0.006	4.8	Mild
	2		3.7	0.034	4.2	
	3		1.7	0.009	1.8	
	mean		3.4	0.016	3.6	
	SD		1.5	0.015	1.6	
	%CV		45.4	94.1	44.1	
Propyl-4-hydroxybenzoate - Lab 2 (1)	1	100%	7.7	0.001	7.7	Mild
	2		11.7	0.018	12.0	
	3		12.7	0.084	14.0	
	mean		10.7	0.034	11.2	
	SD		2.6	0.044	3.2	
	%CV		24.7	127.7	28.7	
Propyl-4-hydroxybenzoate - Lab 2 (2)	1	100%	7.7	0.016	7.9	Mild
	2		6.7	0.051	7.5	
	3		6.7	0.001	6.7	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	In Vitro Score ¹	Prediction
	mean		7.0	0.023	7.4	
	SD		0.6	0.026	0.6	
	%CV		8.2	113.2	8.3	
Propyl-4-hydroxybenzoate - Lab 3 (1)	1	100%	5.3	0.034	5.8	
	2		4.3	0.037	4.9	Mild
	3		12.3	0.012	12.5	
	mean		7.3	0.028	7.7	
	SD		4.4	0.014	4.2	
	%CV		59.7	49.3	53.7	
Propyl-4-hydroxybenzoate - Lab 3 (2)	1	100%	5.3	0.099	6.8	
	2		5.3	0.008	5.4	Mild
	3		6.3	0.014	6.5	
	mean		5.6	0.040	6.2	
	SD		0.6	0.051	0.7	
	%CV		10.2	126.2	11.8	
Tween20 - Lab 1 (1)	1	100%	0.7	0.001	0.7	
	2		-0.3	-0.001	-0.3	Mild
	3		0.7	0.003	0.7	
	mean		0.4	0.001	0.4	
	SD		0.6	0.002	0.6	
	%CV		157.5	200.0	157.5	
Tween20 - Lab 1 (2)	1	100%	0.7	0.003	0.7	
	2		-0.3	0.010	-0.2	Mild
	3		0.7	-0.005	0.6	
	mean		0.4	0.003	0.4	
	SD		0.6	0.008	0.5	
	%CV		157.5	281.5	134.5	
Tween20 - Lab 2 (1)	1	100%	0.3	0.016	0.5	
	2		0.3	-0.005	0.2	Mild
	3		0.3	-0.003	0.3	
	mean		0.3	0.003	0.3	
	SD		0.0	0.012	0.2	
	%CV		0.0	434.6	45.8	
Tween20 - Lab 2 (2)	1	100%	1.3	0.000	1.3	
	2		0.0	0.000	0.0	Mild
	3		0.3	0.015	0.5	
	mean		0.5	0.005	0.6	
	SD		0.7	0.009	0.7	
	%CV		127.6	173.2	109.3	
Tween20 - Lab 3 (1)	1	100%	0.0	0.042	0.6	
	2		0.0	0.007	0.1	Mild
	3		0.0	0.017	0.3	
	mean		0.0	0.022	0.3	
	SD		0.0	0.018	0.3	
	%CV		0.0	81.9	75.5	
Tween20 - Lab 3 (2)	1	100%	0.0	0.000	0.0	
	2		0.0	0.000	0.0	Mild
	3		1.0	0.026	1.4	
	mean		0.3	0.009	0.5	
	SD		0.6	0.015	0.8	
	%CV		173.2	173.2	173.2	
Glycerol - Lab 1 (1)	1	100%	0.3	0.019	0.6	
	2		0.3	0.006	0.4	Mild
	3		1.3	0.010	1.5	
	mean		0.6	0.012	0.8	
	SD		0.6	0.007	0.6	
	%CV		91.2	57.1	70.3	
Glycerol - Lab 1 (2)	1	100%	1.0	0.015	1.2	
	2		1.0	0.011	1.2	Mild
	3		0.0	-0.002	1.0	
	mean		0.7	0.008	1.1	
	SD		0.6	0.009	0.1	
	%CV		86.6	111.1	10.2	

**Intralaboratory CV Analysis of BCOP -
Southee 1998**

Substance - Lab No. (Experiment No.)	Cornea number	Concentration	Opacity	Permeability	<i>In Vitro</i> Score ¹	Prediction
Glycerol - Lab 2 (1)	1	100%	0.0	0.000	0.0	Mild
	2		1.3	0.000	1.2	
	3		0.3	0.000	0.3	
	mean		0.5	0.000	0.5	
	SD		0.7	0.000	0.6	
	%CV		127.6	0.0	124.9	
Glycerol - Lab 2 (2)	1	100%	1.3	-0.006	1.2	Mild
	2		0.3	-0.004	0.2	
	3		0.3	-0.006	0.2	
	mean		0.6	-0.005	0.5	
	SD		0.6	0.001	0.6	
	%CV		91.2	-21.7	108.3	
Glycerol - Lab 3 (1)	1	100%	0.7	-0.007	0.6	Mild
	2		0.7	0.002	0.7	
	3		1.7	-0.004	1.6	
	mean		1.0	-0.003	1.0	
	SD		0.6	0.005	0.6	
	%CV		55.9	-152.8	57.0	
Glycerol - Lab 3 (2)	1	100%	0.7	-0.001	0.7	Mild
	2		0.7	0.002	0.7	
	3		0.7	0.020	1.0	
	mean		0.7	0.007	0.8	
	SD		0.0	0.011	0.2	
	%CV		0.0	162.3	21.7	
Abbreviations: CV = Coefficient of variation; SD =Standard deviation.						
¹ <i>In Vitro</i> Score = Opacity + (15 x permeability value)						

Appendix E2

BCOP Data from Dr. Joseph Sina

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**Intralaboratory CV Analysis of BCOP -
Data from Dr. Joseph Sina**

Substance	Cornea number	Concentration/ Incubation temp.	Opacity	Permeability	<i>In vitro</i> score ¹	Prediction
Dimethyl ethylimidazo pyridine	1	10%/32	11	0.044	11.66	
	2		-3	0.063	-2.06	
	3		5	0.068	6.02	
	4		-3	0.055	-2.18	
	mean		3	0.058	3.36	Mild
	SD		7	0.010	6.73	
	%CV		272	18.2	200.2	
Sodium bitartrate	1	20%/RT	16	0.002	16.03	
	2		8	0.008	8.12	
	3		6	0.020	6.30	
	4		17	0.000	17.00	
	mean		12	0.008	11.86	Mild
	SD		6	0.009	5.44	
	%CV		47	120.0	45.8	
Quinaldine (2-methylquinoline)	1	100%/32	17	0.211	20.17	
	2		23	0.250	26.75	
	3		22	0.507	29.61	
	mean		21	0.323	25.51	Moderate
	SD		3	0.161	4.84	
	%CV		16	49.8	19.0	
	N-Acetyl- <i>p</i> -anisidine	1	20%/RT	7	0.014	7.21
2			11	0.013	11.20	
3			-3	0.005	-2.93	
4			-2	0.000	-2.00	
mean			3	0.008	3.37	Mild
SD			7	0.007	6.94	
%CV			211	83.5	205.9	
1,3-Benzenedicarboxaldehyde	1	20%/32	11	0.019	11.29	
	2		1	0.006	1.09	
	3		10	0.091	11.37	
	4		9	0.051	9.77	
	mean		8	0.042	8.38	Mild
	SD		5	0.038	4.91	
	%CV		59	90.8	58.7	
	1	20%/RT	8	0.018	8.27	
	2		13	0.058	13.87	
	3		3	0.008	3.12	
	4		8	0.035	8.53	
	mean		8	0.030	8.45	Mild
	SD		4	0.022	4.39	
	%CV		51	73.6	52.0	
1	20%/32	24	0.217	27.26		
2		31	0.037	31.56		
3		23	0.255	26.83		
4		31	0.162	33.43		
mean		27	0.168	29.77	Moderate	
SD		4	0.095	3.24		
%CV		16	56.7	10.9		
Triethylammonium iodide	1	20%/RT	21	0.089	22.34	
	2		27	0.042	27.63	
	3		26	0.049	26.74	
	4		18	0.076	19.14	
	mean		23	0.064	23.96	Mild
	SD		4	0.022	3.96	
	%CV		18	34.7	16.5	

**Intralaboratory CV Analysis of BCOP -
Data from Dr. Joseph Sina**

Substance	Cornea number	Concentration/ Incubation temp.	Opacity	Permeability	In vitro score ¹	Prediction
Dicyclohexylcarbodiimide	1	20%/RT	23	0.010	23.15	
	2		22	0.032	22.48	
	3		16	0.037	16.56	
	4		18	0.034	18.51	
	mean		20	0.028	20.17	Mild
	SD		3	0.012	3.16	
	%CV		17	43.7	15.7	
L-Proline, N-carboxyanhydride	1	20%/RT	8	0.007	8.11	
	2		12	0.008	12.12	
	3		-5	0.009	-4.87	
	4		5	0.014	5.21	
	mean		5	0.010	5.14	Mild
	SD		7	0.003	7.25	
	%CV		145	32.7	141.0	
Substituted propanediol	1	20%/RT	50	1.538	73.07	
	2		52	1.552	75.28	
	3		48	2.428	84.42	
	4		46	1.625	70.38	
	mean		49	1.786	75.79	Severe
	SD		3	0.430	6.10	
	%CV		5	24.1	8.0	
3-Trichlorovinylaniline HCL	1	20%/32	398	0.001	398.02	
	2		404	0.001	404.02	
	3		406	0.000	406.00	
	4		408	0.002	408.03	
	mean		404	0.001	404.02	Severe
	SD		4	0.001	4.32	
	%CV		1	81.6	1.1	
Methyl chlorobenzyl butylthio propyl indolyl dimethylpropanoate	1	20%/RT	15	0.005	15.08	
	2		18	0.002	18.03	
	3		8	0.002	8.03	
	4		5	0.001	5.02	
	mean		12	0.003	11.54	Mild
	SD		6	0.002	6.04	
	%CV		52	69.3	52.4	
Nitropyridinone	1	20%/RT	11	0.043	11.65	
	2		12	0.035	12.53	
	3		5	0.025	5.38	
	4		6	0.002	6.03	
	mean		9	0.026	8.89	Mild
	SD		4	0.018	3.71	
	%CV		41	67.7	41.7	
	1	20%/32	-5	0.036	-4.46	
	2		2	0.027	2.41	
	3		-9	0.023	-8.66	
	4		-4	0.003	-3.96	
	mean		-4	0.022	-3.67	Mild
	SD		5	0.014	4.56	
%CV		-114	62.6	-124.5		
alpha-Naphthyl-pyranone	1	20%/RT	1	0.026	1.39	
	2		12	0.020	12.30	
	3		-1	0.013	-0.81	
	4		11	0.018	11.27	
	mean		6	0.019	6.04	Mild
	SD		7	0.005	6.71	
	%CV		117	27.9	111.1	

**Intralaboratory CV Analysis of BCOP -
Data from Dr. Joseph Sina**

Substance	Cornea number	Concentration/ Incubation temp.	Opacity	Permeability	<i>In vitro</i> score ¹	Prediction
Cyclic peptide	1	20%/32	5	0.087	6.31	
	2		2	0.086	3.29	
	3		-5	0.057	-4.15	
	4		5	0.025	5.38	
	mean		2	0.064	2.71	Mild
	SD		5	0.029	4.74	
	%CV		270	46.0	175.1	
Chloroquinoliny methyl ester carboxylic acid	1	20%/RT	38	0.246	41.69	
	2		39	0.325	43.88	
	3		50	0.378	55.67	
	4		25	0.409	31.14	
	mean		38	0.340	43.09	Moderate
	SD		10	0.071	10.06	
	%CV		27	21.0	23.4	
7-Chloroquinaldine	1	20%/RT	4	0.002	4.03	
	2		8	0.000	8.00	
	3		3	0.000	3.00	
	4		6	0.000	6.00	
	mean		5	0.001	5.26	Mild
	SD		2	0.001	2.21	
	%CV		42	200.0	42.1	
	1	20%/32	7	0.044	7.66	
	2		14	0.029	14.44	
	3		8	0.057	8.86	
	4		11	0.043	11.65	
	mean		10	0.043	10.65	Mild
	SD		3	0.011	3.03	
	%CV		32	26.5	28.4	
alpha-Pyranone, 7,7-dioxide	1	20%/RT	0	0.045	0.68	
	2		0	0.072	1.08	
	3		6	0.136	8.04	
	4		2	0.090	3.35	
	mean		2	0.086	3.29	Mild
	SD		3	0.038	3.38	
	%CV		141	44.6	102.9	
Methyl boronic acid	1	20%/RT	10	0.144	12.16	
	2		21	0.143	23.15	
	3		28	0.164	30.46	
	4		19	0.114	20.71	
	mean		20	0.141	21.62	Mild
	SD		7	0.021	7.55	
	%CV		38	14.6	34.9	
	1	20%/32	20	0.305	24.58	
	2		14	0.164	16.46	
	3		21	0.383	26.75	
	4		28	0.303	32.55	
	mean		21	0.289	25.08	Moderate
	SD		6	0.091	6.66	
	%CV		28	31.6	26.6	
1,1-Diphenyl prolinol (sulfate salt)	1	20%/RT	11	1.730	36.95	
	2		17	0.790	28.85	
	3		7	1.144	24.16	
	4		10	2.405	46.08	
	mean		11	1.517	34.01	Severe
	SD		4	0.707	9.62	
	%CV		37	46.6	28.3	
4-(2-Quinolylmethoxy)aniline	1	20%/32	23	0.000	23.00	
	2		-3	0.000	-3.00	
	3		-6	0.001	-5.99	
	4		-3	0.019	-2.72	
	mean		3	0.005	2.83	Mild
	SD		14	0.009	13.53	

**Intralaboratory CV Analysis of BCOP -
Data from Dr. Joseph Sina**

Substance	Cornea number	Concentration/ Incubation temp.	Opacity	Permeability	<i>In vitro</i> score ¹	Prediction
	%CV		494	186.9	479.0	
Sulfone amine	1	20%/RT	11	0.018	11.27	
	2		14	0.008	14.12	
	3		8	0.015	8.23	
	4		24	0.004	24.06	
	mean		14	0.011	14.42	Mild
	SD		7	0.006	6.86	
	%CV		49	56.9	47.6	
<i>p</i> -Nitrobenzyl 2-diazo acetoacetate	1	20%/RT	0	0.028	0.42	
	2		15	0.012	15.18	
	3		24	0.016	24.24	
	4		19	0.039	19.59	
	mean		15	0.024	14.86	Mild
	SD		10	0.012	10.31	
	%CV		71	51.5	69.4	
alpha-Pyranol, 7,7-dioxide	1	20%/RT	12	0.035	12.53	
	2		11	0.033	11.50	
	3		7	0.025	7.38	
	4		-1	0.014	-0.79	
	mean		7	0.027	7.65	Mild
	SD		6	0.010	6.05	
	%CV		82	35.6	79.1	
	1	20%/32	20	0.156	22.34	
	2		29	0.228	32.42	
	3		38	0.115	39.73	
	mean		29	0.166	31.50	Mild
	SD		9	0.057	8.73	
	%CV		31	34.4	27.7	
	Triethylamine hydroiodide	1	20%/RT	29	0.021	29.32
2			32	0.059	32.89	
3			33	0.064	33.96	
4			29	0.038	29.57	
mean			31	0.046	31.43	Moderate
SD			2	0.020	2.34	
%CV			7	43.6	7.4	
Substituted cephalosporanic acid	1	20%/RT	11	0.006	11.09	
	2		17	0.056	17.84	
	3		10	0.017	10.26	
	4		12	0.001	12.02	
	mean		13	0.020	12.80	Mild
	SD		3	0.025	3.44	
	%CV		25	124.6	26.8	
	1	20%/32	-3	0.006	-2.91	
	2		-6	0.000	-6.00	
	3		-6	0.010	-5.85	
	4		-3	0.012	-2.82	
	mean		-5	0.007	-4.40	Mild
	SD		2	0.005	1.77	
	%CV		-38	75.6	-40.2	

**Intralaboratory CV Analysis of BCOP -
Data from Dr. Joseph Sina**

Substance	Cornea number	Concentration/ Incubation temp.	Opacity	Permeability	<i>In vitro</i> score ¹	Prediction
4-Benzoxycarbonicamino-2-hydroxy-butanoic acid	1	20%/RT	392	0.001	392.02	
	2		395	0.006	395.09	
	3		397	0.008	397.12	
	4		399	0.000	399.00	
	mean		396	0.004	395.81	Severe
	SD		3	0.004	2.99	
	%CV		1	103.0	0.8	
N-Sulfonamido hydroxyacetophenone	1	20%/RT	4	0.006	4.09	
	2		3	0.040	3.60	
	3		12	0.026	12.39	
	4		-10	0.002	-9.97	
	mean		2	0.019	2.53	Mild
	SD		9	0.018	9.26	
	%CV		405	96.0	366.2	
	1	20%/32	-8	0.021	-7.69	
	2		-12	0.012	-11.82	
	3		-8	0.015	-7.78	
	4		4	0.001	4.02	
	mean		-6	0.012	-5.82	Mild
	SD		7	0.008	6.83	
	%CV		-115	68.4	-117.5	
Cyclic peptide	1	20%/32	7	0.011	7.17	
	2		4	0.007	4.11	
	3		10	0.013	10.20	
	4		10	0.017	10.26	
	mean		8	0.012	7.93	Mild
	SD		3	0.004	2.93	
	%CV		37	34.7	36.9	
4-Bromo-2,5-dimethylphenol	1	20%/32	54	4.006	114.09	
	2		54	4.708	124.62	
	3		61	5.000	136.00	
	4		76	4.914	149.71	
	mean		61	4.657	131.11	Severe
	SD		10	0.451	15.29	
	%CV		17	9.7	11.7	
2-Amino-3,6-dimethylphenol, hydrobromide salt	1	20%/32	162	0.252	165.78	
	2		141	0.228	144.42	
	3		138	0.294	142.41	
	4		145	0.272	149.08	
	mean		147	0.262	150.42	Severe
	SD		11	0.028	10.61	
	%CV		7	10.8	7.1	
Mixture of 2-chloromethyl-4,7-dimethylbenzoxazole and 2-bromomethyl dimethylbenzoxazole	1	20%/32	14	0.001	14.02	
	2		17	0.000	17.00	
	3		19	0.000	19.00	
	4		22	0.016	22.24	
	mean		18	0.004	18.06	Mild
	SD		3	0.008	3.46	
	%CV		19	184.6	19.1	

**Intralaboratory CV Analysis of BCOP -
Data from Dr. Joseph Sina**

Substance	Cornea number	Concentration/ Incubation temp.	Opacity	Permeability	<i>In vitro</i> score ¹	Prediction
R-Hydroxy ester of benzoic acid compound	1	20%/32	-14	0.050	-13.25	
	2		-10	0.009	-9.87	
	3		-12	0.020	-11.70	
	4		-14	0.022	-13.67	
	mean		-13	0.025	-12.12	Mild
	SD		2	0.017	1.73	
	%CV		-15	69.2	-14.2	
<i>t</i> -Butyl-3-oxo-6-methoxyhexanoate	1	100%/32	7	0.008	7.12	
	2		17	0.000	17.00	
	3		19	0.191	21.87	
	mean		14	0.066	15.33	Mild
	SD		6	0.108	7.51	
	%CV		45	162.9	49.0	
	Methyl 3-oxo-6-methoxyhexanoate	1	100%/32	44	1.795	70.93
2			38	1.935	67.03	
3			34	0.824	46.36	
4			34	0.863	46.95	
mean			38	1.354	57.81	Severe
SD			5	0.593	12.99	
%CV			13	43.8	22.5	
+-Butyl-3R-hydroxy-6-methoxyhepanoate	1	100%/32	12	1.165	29.48	
	2		8	1.160	25.40	
	3		3	0.734	14.01	
	4		13	0.615	22.23	
	mean		9	0.919	22.78	Mild
	SD		5	0.286	6.56	
	%CV		51	31.1	28.8	
Aglycone; natural product	1	20%/32	14	0.005	14.08	
	2		3	0.016	3.24	
	3		11	0.000	11.00	
	4		17	0.005	17.08	
	mean		11	0.007	11.35	Mild
	SD		6	0.007	5.95	
	%CV		54	104.0	52.4	
Carbic anhydride	1	20%/32	192	0.000	192.00	
	2		185	0.000	185.00	
	3		209	0.000	209.00	
	4		221	0.000	221.00	
	mean		202	0.000	201.75	Severe
	SD		16	0.000	16.32	
	%CV		8	0.0	8.1	
3-Bromo-7-methyl-9-flurenone	1	20%/32	-2	0.019	-1.72	
	2		2	0.011	2.17	
	3		-6	0.009	-5.87	
	4		-5	0.007	-4.90	
	mean		-3	0.012	-2.58	Mild
	SD		4	0.005	3.62	
	%CV		-131	45.7	-140.6	
<i>tert</i> -Butyl-6-methoxy-3-S-(2-thiophenethio) hexanoate	1	100%/32	5	0.000	5.00	
	2		-3	0.000	-3.00	
	3		2	0.000	2.00	
	4		2	0.000	2.00	
	mean		2	0.000	1.50	Mild
	SD		3	0.000	3.32	
	%CV		221	0.0	221.1	
Cyanopyridinone	1	20%/32	-5	0.016	-4.76	
	2		-8	0.018	-7.73	
	3		-1	0.007	-0.90	
	4		-4	0.003	-3.96	
	mean		-5	0.011	-4.34	Mild
	SD		3	0.007	2.81	

**Intralaboratory CV Analysis of BCOP -
Data from Dr. Joseph Sina**

Substance	Cornea number	Concentration/ Incubation temp.	Opacity	Permeability	<i>In vitro</i> score ¹	Prediction
	%CV		-64	65.1	-64.8	
S-Hydroxy ester of benzoic acid compound	1	20%/32	12	0.021	12.32	
	2		18	0.000	18.00	
	3		20	0.000	20.00	
	4		33	0.000	33.00	
	mean		21	0.005	20.83	Mild
	SD		9	0.011	8.74	
	%CV		43	200.0	42.0	
Cyano methylpyridine	1	20%/32	8	0.037	8.56	
	2		17	0.025	17.38	
	3		21	0.013	21.20	
	4		15	0.000	15.00	
	mean		15	0.019	15.53	Mild
	SD		5	0.016	5.30	
	%CV		36	84.7	34.2	
Carbonitrile	1	20%/32	21	0.180	23.70	
	2		22	0.200	25.00	
	3		20	0.241	23.62	
	4		12	0.187	14.81	
	mean		19	0.202	21.78	
	SD		5	0.027	4.69	
	%CV		24	13.5	21.5	Mild
Abbreviations: CV = Coefficient of variation; RT = Room temperature; SD = Standard deviation.						
¹ <i>In Vitro</i> Score = Opacity + (15 x permeability value)						

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Appendix E3

BCOP Data from Dr. Freddy Van Gothem

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**Intralaboratory CV Analysis of BCOP -
Data from Dr. Freddy Van Goethem**

Substance	Concentration	Cornea number	Opacity	Permeability	<i>In Vitro</i> Score ¹	<i>In Vitro</i> Classification
2-Ethoxyethanol	100%	1	61.3	1.444	83	
		2	64	1.498	86.5	
		3	60	1.666	85	
		4	64	1.304	83.6	
		5	61.3	1.534	84.3	
		6	59.7	1.646	84.3	
		mean	61.717	1.515	84.450	Severe
		s.d.	1.886	0.134	1.214	
	%CV	3.1%	8.9%	1.4%		
Cyclohexanone	100%	1	80.8	3.954	140.1	
		2	76.2	5.393	157.1	
		3	70.2	4.373	135.8	
		4	75.5	3.903	134	
		5	80.5	4.081	141.7	
		6	76.5	4.341	141.6	
		mean	76.617	4.341	141.717	Severe
		s.d.	3.878	0.551	8.171	
	%CV	5.1%	12.7%	5.8%		
Gluconolactone	20%	1	88.7	0.171	91.2	
		2	86.7	0.181	89.4	
		3	78	0.143	80.1	
		4	78.7	0.21	81.8	
		5	88	0.1	89.5	
		6	91.3	0.118	93.1	
		mean	85.233	0.154	87.517	Severe
		s.d.	5.543	0.041	5.290	
	%CV	6.5%	26.8%	6.0%		
2,4-Pentanedione	100%	1	44.3	0.075	45.5	
		2	47.3	0.046	48	
		3	50.7	0.133	52.7	
		4	48.3	0.123	50.2	
		5	54.3	0.055	55.2	
		6	49.3	0.074	50.4	
		mean	49.033	0.084	50.333	Moderate
		s.d.	3.363	0.036	3.409	
	%CV	6.9%	42.4%	6.8%		
Promethazine hydrochloride	20%	1	119	0.261	122.9	
		2	134.3	0.564	142.8	
		3	144	0.051	144.8	
		4	140.7	0.539	148.8	
		5	143	0.179	145.7	
		6	128.7	0.128	130.6	
		mean	134.950	0.287	139.267	Severe
		s.d.	9.733	0.216	10.182	
	%CV	7.2%	75.3%	7.3%		
Deoxycholic acid, sodium salt	10%	1	12.2	5.181	89.9	
		2	14.8	5.49	97.2	
		3	11.8	6.097	103.3	
		4	16.8	5.204	94.9	
		5	16.5	6.444	113.2	
		6	10.8	5.895	99.3	
		mean	13.817	5.719	99.633	Severe
		s.d.	2.563	0.511	8.008	
	%CV	18.6%	8.9%	8.0%		
Furan	100%	1	24	1.886	52.3	
		2	22.7	2.274	56.8	
		3	19.7	1.815	46.9	
		4	19.3	1.771	45.9	
		5	21	1.93	49.9	
		6	17	2.143	49.1	
		mean	20.617	1.970	50.150	Moderate
		s.d.	2.513	0.197	3.966	
	%CV	12.2%	10.0%	7.9%		
Benzethonium chloride	10%	1	83.7	6.937	187.7	
		2	87.7	4.716	158.4	
		3	85.7	4.452	152.5	

**Intralaboratory CV Analysis of BCOP -
Data from Dr. Freddy Van Goethem**

Substance	Concentration	Cornea number	Opacity	Permeability	<i>In Vitro</i> Score ¹	<i>In Vitro</i> Classification
		4	83.7	5.911	172.3	
		5	79	4.769	150.5	
		6	88	5.736	174	
		mean	84.633	5.420	165.900	Severe
		s.d.	3.327	0.949	14.524	
		%CV	3.9%	17.5%	8.8%	
Hexadecyltrimethylammonium	10%	1	17.7	3.159	65.1	
		2	18.7	3.957	78	
		3	24.7	2.627	64.1	
		4	13.7	3.438	65.2	
		5	18.7	3.271	67.7	
		6	16.7	4.176	79.3	
		mean	18.367	3.438	69.900	Severe
		s.d.	3.615	0.562	6.893	
		%CV	19.7%	16.3%	9.9%	
Quinacrine	20%	1	52.3	0.024	52.7	
		2	58	0.041	58.6	
		3	64	0.097	65.4	
		4	53.3	0.018	53.6	
		5	51.7	0.085	52.9	
		6	62.7	0.112	64.3	
		mean	57.000	0.063	57.917	Severe
		s.d.	5.410	0.040	5.800	
		%CV	9.5%	63.9%	10.0%	
1-Nitropropane	100%	1	18.5	-0.002	18.5	
		2	14.5	0.002	14.5	
		3	16.8	-0.001	16.8	
		4	18.5	0.045	19.2	
		5	15.5	0.004	15.6	
		6	15.2	0	15.2	
		mean	16.500	0.008	16.633	Mild
		s.d.	1.719	0.018	1.885	
		%CV	10.4%	228.2%	11.3%	
Octanol	100%	1	19.2	2.582	57.9	
		2	32.5	1.946	61.7	
		3	28.2	2.265	62.1	
		4	31.2	2.685	71.4	
		5	30.5	2.091	61.9	
		6	24.8	1.7	50.3	
		mean	27.733	2.212	60.883	Severe
		s.d.	4.981	0.377	6.851	
		%CV	18.0%	17.1%	11.3%	
N-Lauroylsarcosine, sodium salt	10%	1	8.7	3.117	55.4	
		2	8.7	3.764	65.1	
		3	8.3	3.981	68.1	
		4	6.7	4.415	72.9	
		5	6.7	3.227	55.1	
		6	7.7	3.411	58.8	
		mean	7.800	3.653	62.567	Severe
		s.d.	0.927	0.496	7.282	
		%CV	11.9%	13.6%	11.6%	
Allyl alcohol	100%	1	116.7	1.552	139.9	
		2	112.3	1.953	141.6	
		3	90.3	1.856	118.2	
		4	97.7	1.578	121.3	
		5	80	1.945	109.2	
		6	67.3	2.804	109.4	
		mean	94.050	1.948	123.267	Severe
		s.d.	18.902	0.455	14.370	
		%CV	20.1%	23.4%	11.7%	
Butyrolactone	100%	1	35	0.38	40.7	
		2	33.3	0.506	40.9	
		3	31	0.291	35.4	
		4	31.7	0.747	42.9	
		5	39.7	0.721	50.5	
		6	34.7	0.326	39.6	

**Intralaboratory CV Analysis of BCOP -
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Substance	Concentration	Cornea number	Opacity	Permeability	<i>In Vitro</i> Score ¹	<i>In Vitro</i> Classification
		mean	34.233	0.495	41.667	Moderate
		s.d.	3.112	0.199	4.992	
		%CV	9.1%	40.2%	12.0%	
1-Phenyl-3-pyrazolidone	20%	1	11.5	0.156	13.8	
		2	11.5	0.093	12.9	
		3	9.8	0.11	11.5	
		4	11.2	0.114	12.9	
		5	9.8	0.145	12	
		6	12.5	0.237	16.1	
		mean	11.050	0.143	13.200	Mild
		s.d.	1.063	0.052	1.630	
		%CV	9.6%	36.4%	12.3%	
Methanol	100%	1	76.8	1.552	100.1	
		2	64.5	0.917	78.3	
		3	71.2	2.088	102.5	
		4	70.8	1.795	97.8	
		5	78.2	1.333	98.2	
		6	80.8	2.5	118.3	
		mean	73.717	1.698	99.200	Severe
		s.d.	5.993	0.560	12.777	
		%CV	8.1%	33.0%	12.9%	
Thiourea	20%	1	86	4.373	151.6	
		2	71	3.379	121.7	
		3	79	4.357	144.4	
		4	94	4.342	159.1	
		5	91	6.263	184.9	
		6	93.7	3.524	146.5	
		mean	85.783	4.373	151.367	Severe
		s.d.	9.187	1.028	20.672	
		%CV	10.7%	23.5%	13.7%	
Ethanol	100%	1	29.8	1.627	54.2	
		2	21.2	1.907	49.8	
		3	21.5	1.686	46.8	
		4	23.8	1.394	44.7	
		5	19.5	1.011	34.7	
		6	18.2	1.73	44.1	
		mean	22.333	1.559	45.717	Moderate
		s.d.	4.123	0.316	6.555	
		%CV	18.5%	20.3%	14.3%	
Ethyl acetoacetate	100%	1	28.3	0.215	31.6	
		2	25.3	0.043	26	
		3	20.7	0.06	21.6	
		4	23.3	0.307	27.9	
		5	25.3	0.023	25.7	
		6	21	0.049	21.7	
		mean	23.983	0.116	25.750	Moderate
		s.d.	2.907	0.117	3.809	
		%CV	12.1%	100.3%	14.8%	
Pyridine	100%	1	47.5	5.145	124.7	
		2	43.8	3.653	98.6	
		3	40.8	3.044	86.5	
		4	42.2	3.207	90.3	
		5	42.8	4.309	107.5	
		6	49.5	4.733	120.5	
		mean	44.433	4.015	104.683	Severe
		s.d.	3.357	0.849	15.705	
		%CV	7.6%	21.1%	15.0%	
Dimethyl sulfoxide	100%	1	6.7	0.218	9.9	
		2	5.3	0.159	7.7	
		3	8.7	0.196	11.6	
		4	4	0.291	8.4	
		5	5.7	0.23	9.1	
		6	7.7	0.134	9.7	
		mean	6.350	0.205	9.400	Mild
		s.d.	1.704	0.056	1.354	
		%CV	26.8%	27.1%	14.4%	

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Substance	Concentration	Cornea number	Opacity	Permeability	<i>In Vitro</i> Score ¹	<i>In Vitro</i> Classification
2-Methoxyethanol	100%	1	48.7	0.879	61.8	
		2	39.7	0.685	49.9	
		3	52.7	0.751	63.9	
		4	37.7	0.732	48.6	
		5	52.7	1.044	68.3	
		6	39	0.713	49.7	
		mean	45.083	0.801	57.033	Severe
		s.d.	7.066	0.137	8.632	
%CV	15.7%	17.1%	15.1%			
Methylisobutyl ketone	100%	1	11.5	0.504	19.1	
		2	14.5	0.395	20.4	
		3	8.5	0.359	13.9	
		4	7.5	0.94	21.6	
		5	13.5	0.335	18.5	
		6	11.5	0.74	22.6	
		mean	11.167	0.546	19.350	Mild
		s.d.	2.733	0.244	3.073	
%CV	24.5%	44.7%	15.9%			
Dibenzoyl-L-tartaric acid	20%	1	90	0.523	97.9	
		2	81	0.425	87.4	
		3	53.7	0.453	60.5	
		4	63.7	0.485	70.9	
		5	87.7	0.194	90.6	
		6	75.3	0.416	81.6	
		mean	75.233	0.416	81.483	Severe
		s.d.	14.166	0.116	13.711	
%CV	18.8%	27.8%	16.8%			
Imidazole	20%	1	41.7	2.096	73.1	
		2	32.7	1.416	53.9	
		3	27.7	1.412	48.9	
		4	52	1.386	72.8	
		5	36.7	1.68	61.9	
		6	51.3	1.597	75.3	
		mean	40.350	1.598	64.317	Severe
		s.d.	9.893	0.271	11.151	
%CV	24.5%	17.0%	17.3%			
2-Aminophenol	20%	1	9.2	0.093	10.6	
		2	10.8	0.056	11.7	
		3	12.2	0.065	13.1	
		4	10.8	0.039	11.4	
		5	12.8	0.083	14.1	
		6	9.5	0.526	17.4	
		mean	10.883	0.144	13.050	Mild
		s.d.	1.426	0.188	2.473	
%CV	13.1%	131.1%	18.9%			
1,2,4-Trimethylbenzene	100%	1	12.2	0.34	17.3	
		2	13.8	0.532	21.8	
		3	12.5	0.383	18.3	
		4	12.8	0.786	24.6	
		5	9.8	1.216	28.1	
		6	13.8	0.212	17	
		mean	12.483	0.578	21.183	Mild
		s.d.	1.473	0.369	4.490	
%CV	11.8%	63.8%	21.2%			
1,2,3-Trichloropropane	100%	1	6	6.151	98.3	
		2	11.3	4.191	74.2	
		3	6.3	4.491	73.7	
		4	7	7.751	123.3	
		5	8.3	4.511	76	
		6	7.3	6.271	101.4	
		mean	7.700	5.561	91.150	Severe
		s.d.	1.940	1.398	20.056	
%CV	25.2%	25.1%	22.0%			
Aluminum hydroxide	20%	1	8.7	0.012	8.9	
		2	9.7	0.004	9.7	
		3	10	0.015	10.2	

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Substance	Concentration	Cornea number	Opacity	Permeability	<i>In Vitro</i> Score ¹	<i>In Vitro</i> Classification
		4	13	0.011	13.2	
		5	6	0.022	6.3	
		6	11	0.006	11.1	
		mean	9.733	0.012	9.900	Mild
		s.d.	2.339	0.006	2.299	
		%CV	24.0%	55.5%	23.2%	
Diacetone alcohol	100%	1	32.5	4.507	100.1	
		2	31.2	4.119	92.9	
		3	34.8	6.509	132.5	
		4	25.5	3.775	82.1	
		5	32.8	3.064	78.8	
		6	29.8	2.74	70.9	
		mean	31.100	4.119	92.883	Severe
		s.d.	3.212	1.341	21.997	
		%CV	10.3%	32.6%	23.7%	
Laurylsulfobetaine	10%	1	14.3	6.259	108.2	
		2	19.3	4.404	85.4	
		3	19	7.4	130	
		4	10	3.743	66.2	
		5	13.3	5.543	96.5	
		6	21.3	7.102	127.9	
		mean	16.200	5.742	102.367	Severe
		s.d.	4.334	1.462	24.819	
		%CV	26.8%	25.5%	24.2%	
2,4-Dichloro-5-sulfamoylbenzoic acid	20%	1	24	-0.011	23.8	
		2	21	-0.014	20.8	
		3	15.3	-0.011	15.2	
		4	11.7	-0.003	11.6	
		5	22	-0.012	21.8	
		6	22	-0.008	21.9	
		mean	19.333	-0.010	19.183	Mild
		s.d.	4.761	0.004	4.723	
		%CV	24.6%	-39.3%	24.6%	
Propyl-4-hydroxybenzoate	20%	1	8	0.008	8.1	
		2	4	0.169	6.5	
		3	6.3	0.063	7.3	
		4	4	0.014	4.2	
		5	4.7	0.089	6	
		6	4	0.053	4.8	
		mean	5.167	0.066	6.150	Mild
		s.d.	1.650	0.059	1.476	
		%CV	31.9%	89.3%	24.0%	
3-Glycidoxypropyltrimethoxysilane	100%	1	19.5	0.213	22.7	
		2	21.2	0.015	21.4	
		3	20.5	0.005	20.6	
		4	12.5	0.111	14.2	
		5	10.5	0.023	10.8	
		6	15.5	0.025	15.9	
		mean	16.617	0.065	17.600	Mild
		s.d.	4.472	0.082	4.693	
		%CV	26.9%	125.3%	26.7%	
Triethanolamine	100%	1	3.2	0.029	3.6	
		2	3.2	0.03	3.6	
		3	1.8	0.016	2.1	
		4	3.5	0.043	4.1	
		5	2.8	0.018	3.1	
		6	1.2	0.016	1.4	
		mean	2.617	0.025	2.983	Mild
		s.d.	0.913	0.011	1.030	
		%CV	34.9%	42.3%	34.5%	
Phenylbutazone	20%	1	0.3	-0.005	0.3	
		2	0.3	-0.012	0.1	
		3	0.3	-0.015	0.1	
		4	1	-0.007	0.9	
		5	0.7	0.005	0.7	
		6	1.3	-0.013	1.1	

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Substance	Concentration	Cornea number	Opacity	Permeability	<i>In Vitro</i> Score ¹	<i>In Vitro</i> Classification
		mean	0.650	-0.008	0.533	Mild
		s.d.	0.428	0.007	0.427	
		%CV	65.8%	-93.6%	80.1%	
Sodium oxalate	20%	1	0.3	0.092	1.7	
		2	1	0.028	1.4	
		3	2.3	0.108	3.9	
		4	1.7	0.128	3.6	
		5	2	0.15	4.2	
		6	2.7	0.115	4.4	
		mean	1.667	0.104	3.200	Mild
		s.d.	0.882	0.042	1.310	
		%CV	52.9%	40.4%	40.9%	
Tetraaminopyrimidine sulfate	20%	1	2.7	-0.009	2.5	
		2	3	0.002	3	
		3	3	-0.009	2.9	
		4	1	0.007	1.1	
		5	1	-0.007	0.9	
		6	4.7	-0.004	4.6	
		mean	2.567	-0.003	2.500	Mild
		s.d.	1.404	0.007	1.367	
		%CV	54.7%	-196.0%	54.7%	
Magnesium carbonate	20%	1	1	0.02	1.3	
		2	0	0.015	0.2	
		3	0	0.023	0.4	
		4	1	0.012	1.2	
		5	0	0.015	0.2	
		6	1	0.014	1.2	
		mean	0.500	0.017	0.750	Mild
		s.d.	0.548	0.004	0.536	
		%CV	109.5%	25.1%	71.4%	
Betaine monohydrate	20%	1	6.7	0.015	6.9	
		2	1	0.026	1.4	
		3	1	0.027	1.4	
		4	5	0.02	5.3	
		5	1.7	0.055	2.5	
		6	3	0.029	3.4	
		mean	3.067	0.029	3.483	Mild
		s.d.	2.339	0.014	2.219	
		%CV	76.3%	48.5%	63.7%	
Triton X-155	10%	1	2.7	0.003	2.7	
		2	3.7	-0.006	3.6	
		3	4.7	0	4.7	
		4	0.7	0.004	0.7	
		5	1.7	0.02	2	
		6	4.7	0.032	5.1	
		mean	3.033	0.009	3.133	Mild
		s.d.	1.633	0.014	1.669	
		%CV	53.8%	161.4%	53.3%	
EDTA, di-potassium salt	20%	1	0.3	0.024	0.7	
		2	1	0.02	1.3	
		3	0.3	-0.004	0.3	
		4	0.3	-0.004	0.3	
		5	1	0.024	1.4	
		6	1.7	0	1.7	
		mean	0.767	0.010	0.950	Mild
		s.d.	0.572	0.014	0.599	
		%CV	74.5%	140.3%	63.1%	
BRIJ-35	10%	1	1.7	0.012	1.8	
		2	0.7	0.001	0.7	
		3	0.7	0	0.7	
		4	2	-0.006	1.9	
		5	0.7	-0.008	0.6	
		6	0.7	-0.009	0.5	
		mean	1.083	-0.002	1.033	Mild
		s.d.	0.601	0.008	0.638	
		%CV	55.5%	-471.9%	61.7%	

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Substance	Concentration	Cornea number	Opacity	Permeability	<i>In Vitro</i> Score ¹	<i>In Vitro</i> Classification
Petroleum ether	100%	1	3.2	0.006	3.3	
		2	0.5	0.02	0.8	
		3	3.8	0.035	4.4	
		4	2.2	0.008	2.3	
		5	2.8	0.006	2.9	
		6	-1.2	0.012	-1	
		mean	1.883	0.015	2.117	Mild
s.d.	1.885	0.011	1.934			
%CV	100.1%	78.2%	91.4%			
Anthracene	20%	1	3	0.001	3	
		2	0.3	-0.009	0.2	
		3	1.7	0.005	1.7	
		4	0.3	0.004	0.4	
		5	2.7	0.007	2.8	
		6	0.3	0.01	0.5	
		mean	1.383	0.003	1.433	Mild
s.d.	1.262	0.007	1.253			
%CV	91.3%	220.1%	87.4%			
Dimethylbiguanide	20%	1	0	0.016	0.2	
		2	2	0.014	2.2	
		3	1	0.036	1.5	
		4	-1.7	0.034	-1.2	
		5	-0.7	0.457	6.2	
		6	3.3	0.026	3.7	
		mean	0.650	0.097	2.100	Mild
s.d.	1.829	0.177	2.617			
%CV	281.5%	181.7%	124.6%			
MYRJ-45	10%	1	2.8	0.012	3	
		2	-1.2	0.001	-1.1	
		3	0.2	0.005	0.2	
		4	-0.5	0.002	-0.5	
		5	0.5	0.001	0.5	
		6	0.5	0.009	0.6	
		mean	0.383	0.005	0.450	Mild
s.d.	1.356	0.005	1.407			
%CV	353.6%	92.1%	312.6%			
Hexane	100%	1	0.7	0.002	0.7	
		2	4.3	0.002	4.4	
		3	2.3	0	2.3	
		4	-0.3	0.007	-0.2	
		5	-0.3	0.003	-0.3	
		6	1.3	0.002	1.4	
		mean	1.333	0.003	1.383	Mild
s.d.	1.759	0.002	1.775			
%CV	131.9%	87.7%	128.3%			
2-Mercaptopyrimidine	20%	1	0	-0.005	-0.1	
		2	0	-0.004	-0.1	
		3	0	-0.006	-0.1	
		4	0	0.001	0	
		5	0	-0.005	-0.1	
		6	-1	-0.004	-1.1	
		mean	-0.167	-0.004	-0.250	Mild
s.d.	0.408	0.002	0.418			
%CV	-244.9%	-64.8%	-167.3%			
Iminodibenzyl	20%	1	0	0.002	0	
		2	0	0.002	0	
		3	0	-0.002	0	
		4	0	-0.003	0	
		5	1	0.001	1	
		6	0	-0.004	-0.1	
		mean	0.167	-0.001	0.150	Mild
s.d.	0.408	0.003	0.418			
%CV	244.9%	-398.7%	278.9%			
DL-Glutamic acid	20%	1	0.3	-0.004	0.3	
		2	-0.7	0.003	-0.6	
		3	0.3	-0.012	0.2	

**Intralaboratory CV Analysis of BCOP -
Data from Dr. Freddy Van Goethem**

Substance	Concentration	Cornea number	Opacity	Permeability	<i>In Vitro</i> Score ¹	<i>In Vitro</i> Classification
		4	-0.7	-0.005	-0.7	
		5	0.3	-0.006	0.2	
		6	-0.7	-0.008	-0.8	
		mean	-0.200	-0.005	-0.233	Mild
		s.d.	0.548	0.005	0.516	
		%CV	-273.9%	-93.1%	-221.3%	

Abbreviations: CV = Coefficient of variation; SD = Standard deviation

¹*In Vitro* Score = Opacity + (15 x permeability value)