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APPENDIX

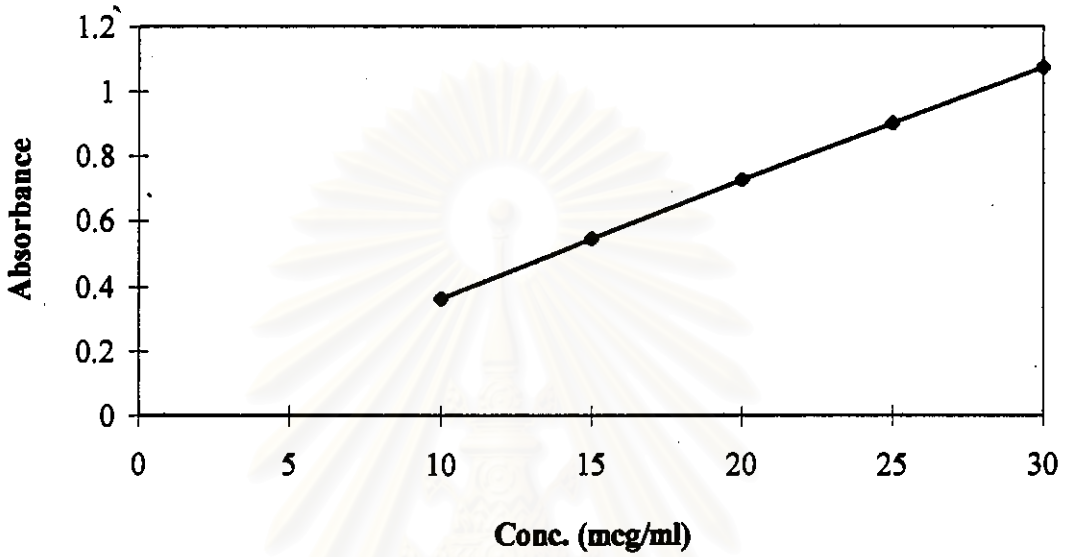

Figure 39 Calibration curve of diclofenac diethylamine in ethyl alcohol.

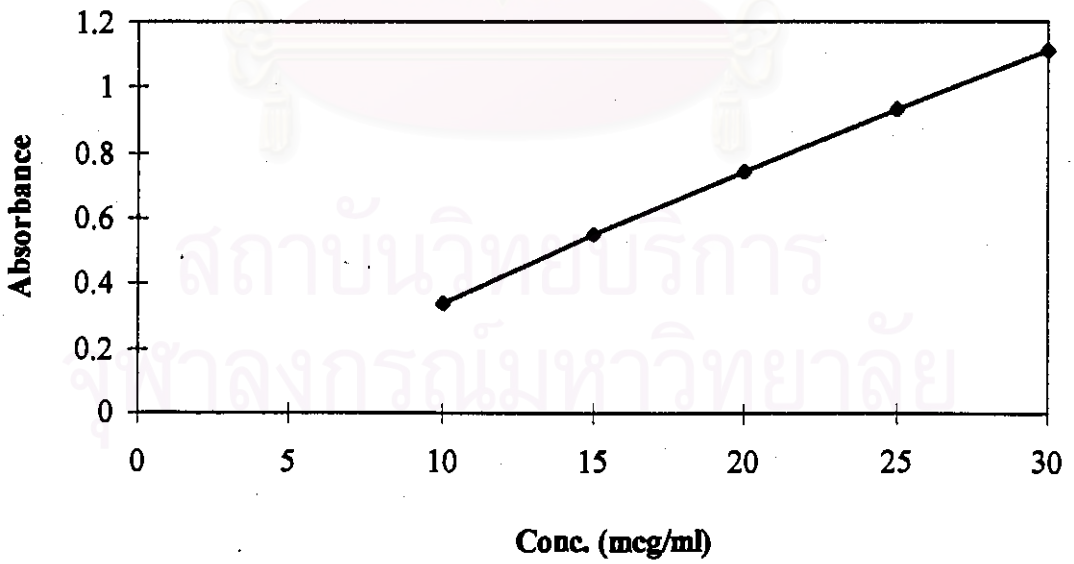

Figure 40 Calibration curve of diclofenac diethylamine in isopropyl alcohol.

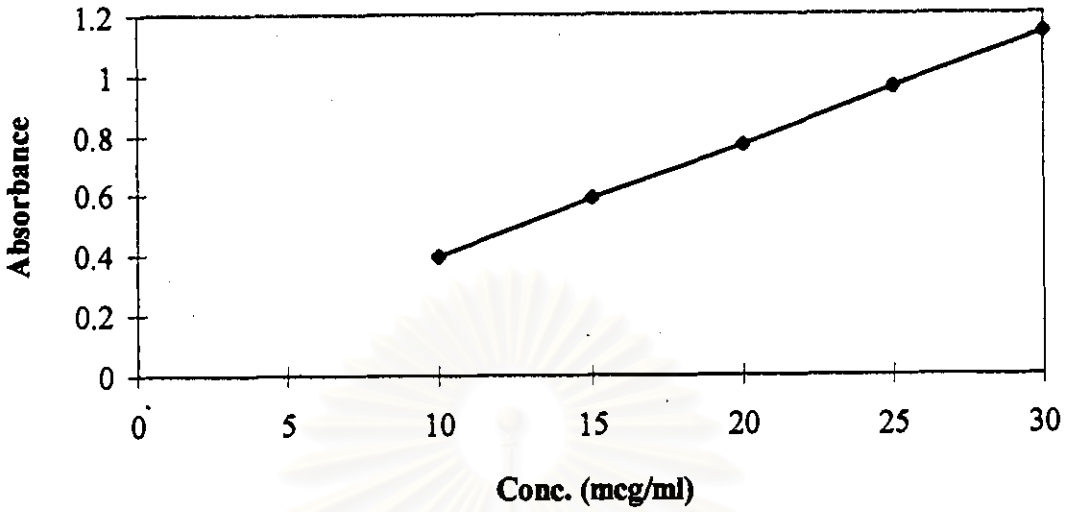

Figure 41 Calibration curve of diclofenac diethylamine in propylene glycol.

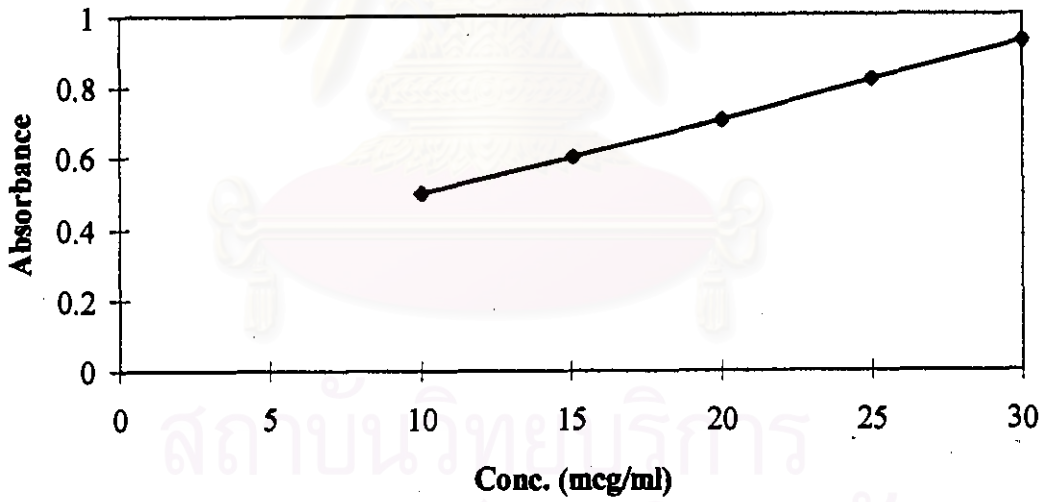

Figure 42 Calibration curve of diclofenac diethylamine in polyethylene glycol 400.

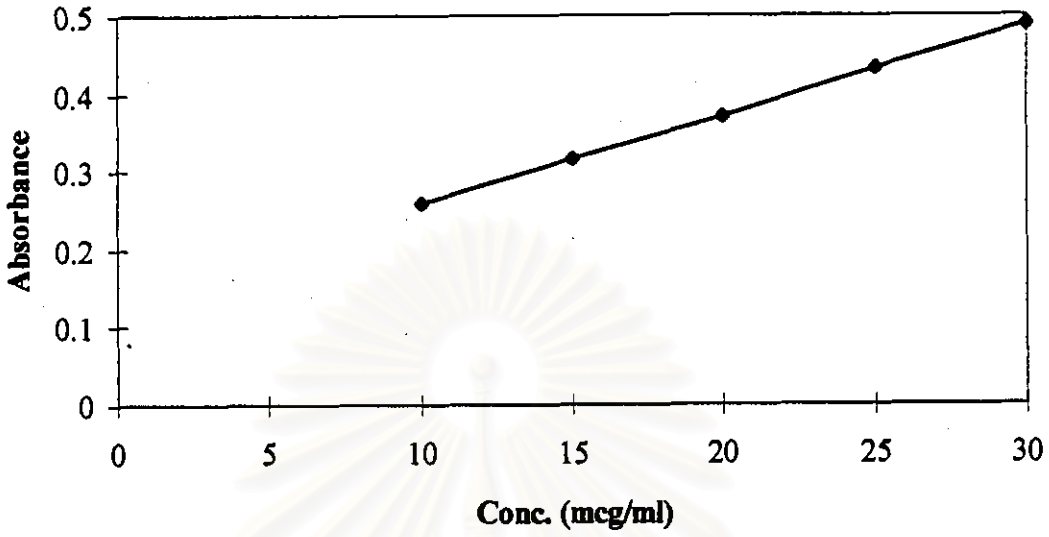

Figure 43 Calibration curve of diclofenac diethylamine in benzyl alcohol.

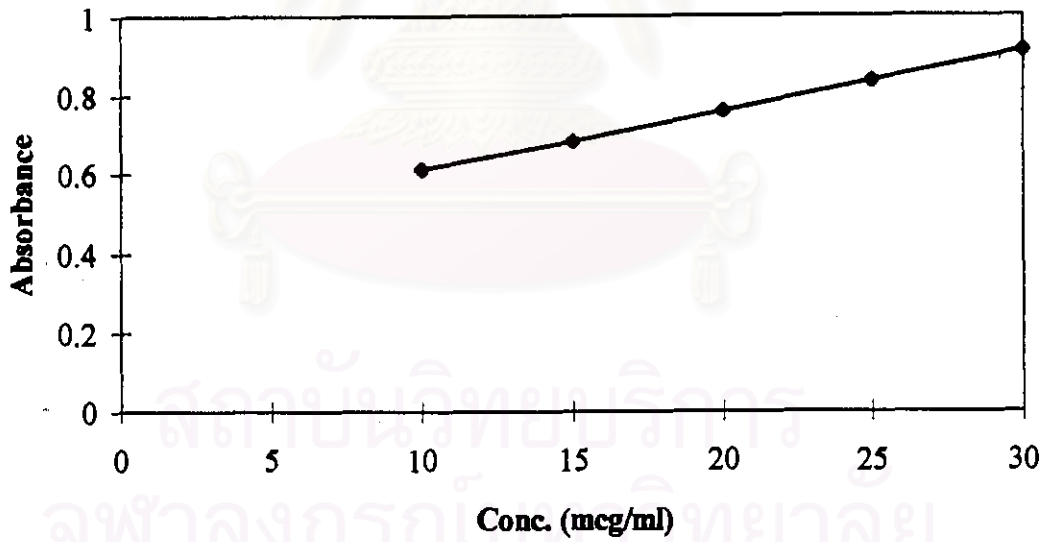

Figure 44 Calibration curve of diclofenac diethylamine in N,N-dimethyl acetamide.

Table 15 Ratio between peak area of internal standard and diclofenac diethylamine with HPLC method at 282 nm.

Conc. (mcg/ml)	Ratio	Conc. (mcg/ml)	Ratio
0	0	0	0
2	0.987	10	0.851
4	1.953	20	1.722
6	2.917	30	2.616
8	3.883	40	3.467
10	4.849	50	4.299
r^2	0.999	r^2	0.999
intercept	-0.021	intercept	0.011
slope	2.065	slope	11.527

Table 16 Cumulative release of diclofenac diethylamine per surface area (mg/cm^2) from Voltaren® emulgel patch.

Time	A	B	C	D	E	F	G	H	I	J	Mean	SD
0.5	0.551	0.516	0.438	0.385	0.475	0.415	0.388	0.219	0.066	0.065	0.352	0.175
1	0.637	0.710	0.557	0.584	0.514	0.548	0.482	0.473	0.106	0.107	0.472	0.205
2	0.828	0.850	0.750	0.792	0.858	0.736	0.659	0.820	0.251	0.409	0.695	0.205
3	1.020	1.012	0.895	0.869	0.894	0.901	0.823	1.211	0.426	0.772	0.882	0.202
4	1.121	1.195	0.941	0.980	1.049	1.013	0.974	1.378	0.670	1.085	1.040	0.183
5	1.266	1.378	1.052	1.060	1.128	1.081	1.049	1.543	0.974	1.331	1.186	0.184
6	1.324	1.384	1.165	1.144	1.270	1.152	1.121	1.560	1.072	1.315	1.251	0.149
8	1.323	1.395	1.318	1.311	1.398	1.309	1.288	1.496	1.243	1.464	1.354	0.081
10	1.323	1.571	1.471	1.478	1.526	1.494	1.403	1.525	1.194	1.620	1.460	0.125
12	1.839	1.913	1.435	1.420	1.606	1.418	1.409	1.667	1.175	1.565	1.545	0.221

Table 17 Cumulative skin permeation of diclofenac diethylamine per surface area (mg/cm^2) from Voltaren® emulgel patch.

Time	A	B	C	D	E	F	G	H	I	J	K	Mean	SD
0.5	0.000	0.003	0.000	0.004	0.002	0.002	0.004	0.002	0.009	0.008	0.015	0.005	0.005
1	0.014	0.002	0.000	0.005	0.004	0.002	0.002	0.003	0.012	0.011	0.012	0.006	0.005
2	0.004	0.007	0.007	0.008	0.008	0.004	0.002	0.004	0.015	0.011	0.013	0.007	0.004
3	0.008	0.013	0.009	0.003	0.004	0.002	0.001	0.009	0.013	0.012	0.012	0.008	0.004
4	0.013	0.011	0.005	0.006	0.009	0.006	0.003	0.003	0.013	0.011	0.012	0.008	0.004
5	0.007	0.015	0.009	0.006	0.011	0.003	0.002	0.003	0.013	0.013	0.010	0.008	0.004
6	0.010	0.016	0.009	0.005	0.012	0.003	0.002	0.002	0.014	0.013	0.011	0.009	0.005
8	0.012	0.026	0.013	0.005	0.019	0.004	0.003	0.001	0.011	0.014	0.012	0.011	0.007
10	0.018	0.030	0.013	0.010	0.029	0.004	0.003	0.004	0.011	0.016	0.012	0.014	0.009
12	0.019	0.047	0.014	0.011	0.032	0.005	0.003	0.006	0.012	0.016	0.012	0.016	0.013

Table 18 Cumulative skin permeation of diclofenac diethylamine per surface area (mg/cm^2) from Voltaren® emulgel.

Time	A	B	C	D	E	F	Mean	SD
0.5	0.001	0.000	0.000	0.009	0.000	0.010	0.003	0.005
1.0	0.001	0.004	0.005	0.014	0.000	0.012	0.006	0.006
2.0	0.002	0.000	0.002	0.043	0.007	0.011	0.011	0.016
3.0	0.004	0.003	0.003	0.062	0.010	0.014	0.016	0.023
4.0	0.005	0.007	0.015	0.074	0.010	0.019	0.022	0.026
5.0	0.011	0.008	0.009	0.076	0.012	0.024	0.023	0.026
6.0	0.010	0.014	0.008	0.085	0.015	0.028	0.026	0.029
8.0	0.020	0.023	0.017	0.091	0.021	0.034	0.034	0.028
10.0	0.028	0.033	0.023	0.104	0.027	0.046	0.043	0.031
12.0	0.040	0.045	0.034	0.115	0.036	0.061	0.055	0.031

Table 19 Cumulative release of diclofenac diethylamine per surface area (mg/cm^2) from diclofenac diethylamine-TDS in propylene glycol and various gelling agents.

R_x #	Time (hr)	Cumulative release			Mean	SD	R_x #	Time (hr)	Cumulative release			Mean	SD
		A	B	C					A	B	C		
1	0	0	0	0	0	0	4	0	0	0	0	0	0
	0.5	1.540	1.334	0.574	1.150	0.509		0.5	0.494	0.533	0.554	0.527	0.030
	1	1.682	1.614	0.990	1.429	0.382		1	0.778	0.833	0.867	0.826	0.045
	2	1.707	1.678	1.186	1.523	0.293		2	1.154	1.219	1.284	1.219	0.065
	3	1.763	1.681	1.429	1.625	0.174		3	1.306	1.381	1.442	1.376	0.068
	4	1.766	1.694	1.445	1.635	0.168		4	1.382	1.460	1.526	1.456	0.072
	5	1.774	1.695	1.550	1.673	0.113		5	1.413	1.481	1.559	1.485	0.073
	6	1.777	1.711	1.556	1.681	0.114		6	1.439	1.508	1.571	1.506	0.066
	8	1.778	1.738	1.578	1.698	0.106		8	1.478	1.532	1.586	1.532	0.054
	10	1.798	1.765	1.592	1.718	0.111		10	1.515	1.570	1.611	1.565	0.048
	12	1.838	1.770	1.605	1.738	0.120		12	1.531	1.570	1.616	1.572	0.042
2	0	0	0	0	0	0	5	0	0	0	0	0	0
	0.5	1.137	0.681	0.200	0.672	0.468		0.5	0.400	0.440	0.469	0.436	0.035
	1	1.825	1.182	0.639	1.215	0.594		1	0.637	0.685	0.734	0.685	0.048
	2	2.028	1.682	1.395	1.702	0.317		2	0.968	1.047	1.116	1.044	0.074
	3	2.203	1.990	1.774	1.989	0.214		3	1.181	1.267	1.338	1.262	0.079
	4	2.421	2.210	2.016	2.216	0.203		4	1.324	1.405	1.480	1.403	0.078
	5	2.560	2.350	2.154	2.355	0.203		5	1.469	1.552	1.638	1.553	0.085
	6	2.589	2.380	2.192	2.387	0.199		6	1.582	1.667	1.748	1.666	0.083
	8	2.634	2.420	2.236	2.430	0.199		8	1.770	1.853	1.943	1.855	0.087
	10	2.649	2.433	2.259	2.447	0.196		10	1.951	2.031	2.080	2.021	0.066
	12	2.659	2.441	2.267	2.456	0.196		12	1.974	2.053	2.104	2.044	0.065
3	0	0	0	0	0	0	6	0	0	0	0	0	0
	0.5	1.180	0.723	0.230	0.711	0.475		0.5	1.152	1.271	1.388	1.270	0.118
	1	1.825	1.184	0.599	1.203	0.613		1	1.620	1.781	1.936	1.779	0.158
	2	2.368	1.976	1.619	1.988	0.374		2	2.109	2.281	2.489	2.293	0.190
	3	2.875	2.457	2.113	2.482	0.382		3	2.492	2.716	2.930	2.712	0.219
	4	3.105	2.841	2.499	2.815	0.304		4	2.635	2.835	3.051	2.841	0.208
	5	3.245	2.936	2.657	2.946	0.294		5	2.770	2.975	3.190	2.979	0.210
	6	3.280	2.970	2.701	2.984	0.290		6	2.843	3.076	3.270	3.063	0.214
	8	3.416	3.106	2.883	3.135	0.268		8	3.082	3.321	3.506	3.303	0.212
	10	3.465	3.153	2.940	3.186	0.264		10	3.349	3.571	3.727	3.549	0.190
	12	3.488	3.176	2.967	3.210	0.262		12	3.375	3.581	3.732	3.563	0.179

Table 19 Cumulative release of diclofenac diethylamine per surface area (mg/cm^2) from diclofenac diethylamine-TDS in propylene glycol and various gelling agents. (continue)

R_x #	Time (hr)	Cumulative release			Mean	SD	R_x #	Time (hr)	Cumulative release (mg/cm^2)			Mean	SD
		A	B	C					A	B	C		
7	0	0	0	0	0	0	10	0	0	0	0	0	0
	0.5	0.616	0.652	0.725	0.664	0.055		0.5	0.550	0.589	0.641	0.593	0.046
	1	0.861	0.920	1.011	0.931	0.076		1	0.983	1.025	1.115	1.041	0.067
	2	1.273	1.355	1.466	1.365	0.097		2	1.566	1.629	1.702	1.632	0.068
	3	1.480	1.573	1.697	1.583	0.109		3	1.880	1.826	1.964	1.890	0.069
	4	1.695	1.785	1.914	1.798	0.110		4	2.118	2.176	2.261	2.185	0.072
	5	1.878	1.967	2.117	1.987	0.121		5	2.177	2.231	2.318	2.242	0.071
	6	2.044	2.133	2.274	2.151	0.116		6	2.256	2.347	2.399	2.334	0.072
	8	2.462	2.552	2.696	2.570	0.118		8	2.385	2.473	2.524	2.461	0.070
	10	2.781	2.860	3.009	2.883	0.115		10	2.481	2.439	2.563	2.494	0.063
	12	2.799	2.868	3.009	2.892	0.107		12	2.459	2.505	2.579	2.514	0.061
8	0	0	0	0	0	0	11	0	0	0	0	0	0
	0.5	0.459	0.502	0.523	0.494	0.033		0.5	1.729	1.832	1.965	1.842	0.119
	1	0.621	0.662	0.677	0.654	0.029		1	2.322	2.422	2.565	2.436	0.122
	2	0.990	1.041	1.064	1.032	0.038		2	2.879	2.946	3.139	2.988	0.135
	3	1.277	1.323	1.358	1.319	0.040		3	3.138	3.044	3.308	3.163	0.134
	4	1.471	1.511	1.554	1.512	0.042		4	3.186	3.269	3.454	3.303	0.137
	5	1.660	1.711	1.739	1.703	0.040		5	3.270	3.320	3.533	3.374	0.139
	6	1.838	1.922	1.937	1.899	0.053		6	3.281	3.368	3.538	3.395	0.131
	8	2.002	2.088	2.108	2.066	0.056		8	3.326	3.368	3.535	3.409	0.111
	10	2.180	2.261	2.279	2.240	0.053		10	3.356	3.390	3.553	3.433	0.105
	12	2.241	2.321	2.359	2.307	0.060		12	3.368	3.400	3.560	3.442	0.103
9	0	0	0	0	0	0	12	0	0	0	0	0	0
	0.5	0.025	0.028	0.031	0.028	0.003		0.5	1.012	1.046	1.116	1.058	0.053
	1	0.121	0.124	0.141	0.129	0.011		1	1.719	1.756	1.851	1.775	0.068
	2	0.291	0.288	0.328	0.302	0.023		2	2.321	2.470	2.329	2.374	0.084
	3	0.431	0.445	0.496	0.457	0.034		3	2.860	2.906	3.031	2.932	0.088
	4	0.516	0.527	0.581	0.541	0.035		4	3.019	3.115	3.193	3.109	0.087
	5	0.647	0.656	0.716	0.673	0.037		5	3.127	3.111	3.250	3.163	0.076
	6	0.725	0.730	0.794	0.750	0.038		6	3.130	3.117	3.249	3.165	0.073
	8	0.965	0.979	1.049	0.997	0.045		8	3.144	3.145	3.268	3.186	0.071
	10	1.101	1.195	1.125	1.140	0.049		10	3.152	3.154	3.276	3.194	0.071
	12	1.217	1.221	1.301	1.246	0.047		12	3.171	3.156	3.285	3.204	0.071

Table 19 Cumulative release of diclofenac diethylamine per surface area (mg/cm^2) from diclofenac diethylamine-TDS in propylene glycol and various gelling agents. (continue)

R_x #	Time (hr)	Cumulative release			Mean	SD	R_x #	Time (hr)	Cumulative release (mg/cm^2)			Mean	SD
		A	B	C					A	B	C		
13	0	0	0	0	0	0	16	0	0	0	0	0	0
	0.5	0.856	0.869	0.934	0.886	0.042		0.5	1.403	1.634	1.985	1.674	0.293
	1	1.493	1.505	1.585	1.528	0.050		1	2.105	2.416	2.845	2.455	0.372
	2	2.119	2.116	2.233	2.156	0.067		2	2.739	3.024	3.418	3.060	0.341
	3	2.348	2.355	2.471	2.391	0.069		3	2.925	3.246	3.629	3.267	0.353
	4	2.569	2.590	2.695	2.618	0.067		4	2.992	3.327	3.637	3.318	0.323
	5	2.647	2.669	2.762	2.693	0.061		5	3.096	3.402	3.696	3.398	0.300
	6	2.703	2.728	2.802	2.744	0.052		6	3.160	3.412	3.699	3.424	0.270
	8	2.748	2.765	2.843	2.785	0.051		8	3.247	3.439	3.719	3.468	0.238
	10	2.788	2.787	2.870	2.815	0.047		10	3.312	3.447	3.723	3.494	0.209
	12	2.834	2.831	2.911	2.859	0.045		12	3.318	3.451	3.723	3.498	0.206
14	0	0	0	0	0	0	17	0	0	0	0	0	0
	0.5	0.036	0.043	0.054	0.044	0.009		0.5	1.289	1.498	1.727	1.504	0.219
	1	0.127	0.156	0.183	0.155	0.028		1	1.839	1.984	2.346	2.056	0.261
	2	0.351	0.412	0.486	0.416	0.067		2	2.526	2.626	3.049	2.734	0.278
	3	0.502	0.576	0.656	0.578	0.077		3	2.804	2.875	3.282	2.987	0.258
	4	0.639	0.713	0.801	0.717	0.081		4	2.880	2.956	3.304	3.047	0.226
	5	0.731	0.813	0.899	0.815	0.084		5	2.948	2.982	3.309	3.080	0.199
	6	0.842	0.923	1.013	0.926	0.086		6	3.003	3.012	3.314	3.109	0.177
	8	0.923	0.987	1.066	0.992	0.071		8	3.014	3.016	3.317	3.116	0.175
	10	1.002	1.061	1.142	1.068	0.071		10	3.024	3.028	3.326	3.126	0.173
	12	1.085	1.150	1.227	1.154	0.071		12	3.035	3.032	3.333	3.133	0.173
15	0	0	0	0	0	0	18	0	0	0	0	0	0
	0.5	0.211	0.246	0.290	0.249	0.039		0.5	1.002	1.136	1.303	1.147	0.151
	1	0.412	0.473	0.535	0.473	0.062		1	1.607	1.755	2.005	1.789	0.201
	2	0.832	0.937	1.047	0.939	0.108		2	2.366	2.508	2.803	2.559	0.223
	3	1.111	1.231	1.349	1.230	0.119		3	2.623	2.716	3.024	2.788	0.210
	4	1.363	1.477	1.599	1.479	0.118		4	2.736	2.856	3.116	2.903	0.194
	5	1.590	1.696	1.819	1.702	0.115		5	2.792	2.932	3.142	2.955	0.176
	6	1.690	1.769	1.905	1.788	0.109		6	2.865	2.969	3.163	2.999	0.151
	8	1.895	1.922	2.110	1.976	0.117		8	2.892	3.003	3.181	3.026	0.146
	10	2.041	2.065	2.253	2.119	0.116		10	2.965	3.036	3.208	3.070	0.125
	12	2.042	2.079	2.257	2.126	0.115		12	2.975	3.043	3.216	3.078	0.124

Table 19 Cumulative release of diclofenac diethylamine per surface area (mg/cm^2) from diclofenac diethylamine-TDS in propylene glycol and various gelling agents. (continue)

R_x #	Time (hr)	Cumulative release			Mean	SD	R_x #	Time (hr)	Cumulative release (mg/cm^2)			Mean	SD
		A	B	C					A	B	C		
19	0	0	0	0	0	0	22	0	0	0	0	0	0
	0.5	0.261	0.273	0.337	0.290	0.041		0.5	0.911	1.021	1.120	1.017	0.104
	1	0.526	0.554	0.644	0.575	0.062		1	1.858	2.187	2.202	2.082	0.194
	2	1.041	1.085	1.201	1.109	0.082		2	2.615	2.922	3.016	2.851	0.210
	3	1.301	1.313	1.455	1.356	0.086		3	2.900	3.115	3.294	3.103	0.197
	4	1.512	1.554	1.651	1.572	0.072		4	3.057	3.201	3.386	3.215	0.165
	5	1.685	1.706	1.800	1.731	0.061		5	3.129	3.251	3.436	3.272	0.154
	6	1.692	1.739	1.812	1.748	0.060		6	3.169	3.298	3.455	3.307	0.144
	8	1.761	1.777	1.844	1.794	0.044		8	3.249	3.322	3.487	3.352	0.122
	10	1.786	1.786	1.840	1.804	0.031		10	3.297	3.371	3.515	3.394	0.111
	12	1.793	1.797	1.840	1.810	0.026		12	3.319	3.396	3.521	3.412	0.102
20	0	0	0	0	0	0	23	0	0	0	0	0	0
	0.5	1.142	1.241	1.480	1.288	0.174		0.5	0.326	0.369	0.409	0.368	0.042
	1	1.702	1.825	2.093	1.873	0.200		1	0.688	0.775	0.828	0.763	0.071
	2	2.106	2.252	2.472	2.277	0.184		2	1.288	1.376	1.489	1.384	0.101
	3	2.245	2.423	2.566	2.411	0.161		3	1.809	1.927	2.049	1.928	0.120
	4	2.257	2.429	2.573	2.419	0.158		4	2.283	2.376	2.537	2.399	0.129
	5	2.286	2.450	2.573	2.436	0.144		5	2.549	2.646	2.778	2.657	0.115
	6	2.296	2.452	2.574	2.441	0.139		6	2.742	2.853	2.959	2.851	0.108
	8	2.304	2.497	2.576	2.459	0.140		8	2.960	3.036	3.160	3.052	0.101
	10	2.318	2.500	2.579	2.466	0.133		10	2.977	3.049	3.175	3.067	0.100
	12	2.343	2.511	2.577	2.477	0.121		12	2.994	3.052	3.176	3.074	0.093
21	0	0	0	0	0	0							
	0.5	1.305	1.562	1.716	1.528	0.208							
	1	2.451	2.764	3.055	2.757	0.302							
	2	3.286	3.634	3.933	3.617	0.324							
	3	3.472	3.876	4.063	3.803	0.302							
	4	3.546	3.905	4.116	3.855	0.288							
	5	3.597	3.947	4.140	3.895	0.275							
	6	3.631	3.974	4.152	3.919	0.265							
	8	3.640	3.977	4.158	3.925	0.263							
	10	3.655	3.982	4.166	3.934	0.259							
	12	3.686	4.013	4.189	3.963	0.255							

Table 20 Cumulative skin permeation of diclofenac diethylamine per surface area (mg/cm^2) from diclofenac diethylamine-TDS in poloxamer F-127.

R_x #	Time (hr)	Cumulative skin permeation						Mean	SD
		A	B	C	D	E	F		
6	0	0	0	0	0	0	0	0	0
	0.5	0.005	0.006	0.009	0.009	0.009	0.011	0.008	0.002
	1	0.005	0.007	0.009	0.009	0.009	0.011	0.008	0.002
	2	0.006	0.008	0.010	0.010	0.010	0.013	0.009	0.002
	3	0.006	0.008	0.010	0.010	0.010	0.013	0.010	0.002
	4	0.006	0.008	0.010	0.011	0.010	0.013	0.010	0.003
	5	0.006	0.008	0.011	0.011	0.011	0.013	0.010	0.002
	6	0.007	0.009	0.011	0.011	0.011	0.015	0.011	0.002
	8	0.011	0.012	0.013	0.014	0.014	0.017	0.013	0.002
	10	0.013	0.016	0.016	0.017	0.017	0.021	0.017	0.003
	12	0.014	0.019	0.020	0.020	0.021	0.023	0.019	0.003
7	0	0	0	0	0	0	0	0	0
	0.5	0.006	0.006	0.008	0.008	0.009	0.012	0.008	0.002
	1	0.006	0.006	0.008	0.008	0.009	0.012	0.008	0.002
	2	0.006	0.006	0.008	0.009	0.010	0.012	0.008	0.002
	3	0.007	0.007	0.009	0.009	0.010	0.012	0.009	0.002
	4	0.007	0.007	0.009	0.009	0.010	0.013	0.009	0.002
	5	0.007	0.007	0.009	0.010	0.011	0.013	0.009	0.002
	6	0.007	0.008	0.009	0.010	0.012	0.014	0.010	0.002
	8	0.009	0.010	0.011	0.011	0.013	0.018	0.012	0.003
	10	0.009	0.012	0.014	0.016	0.016	0.019	0.014	0.003
	12	0.011	0.014	0.015	0.017	0.018	0.022	0.016	0.004
8	0	0	0	0	0	0	0	0	0
	0.5	0.004	0.007	0.009	0.009	0.009	0.010	0.008	0.002
	1	0.004	0.006	0.009	0.009	0.010	0.012	0.008	0.003
	2	0.004	0.006	0.008	0.009	0.010	0.012	0.008	0.003
	3	0.003	0.007	0.009	0.009	0.012	0.013	0.009	0.004
	4	0.003	0.007	0.009	0.009	0.011	0.014	0.009	0.004
	5	0.006	0.007	0.008	0.008	0.010	0.013	0.009	0.003
	6	0.005	0.008	0.009	0.010	0.011	0.012	0.009	0.003
	8	0.006	0.008	0.011	0.012	0.012	0.014	0.010	0.003
	10	0.005	0.011	0.013	0.014	0.014	0.016	0.012	0.004
	12	0.011	0.011	0.014	0.014	0.014	0.017	0.014	0.002

Table 21 Cumulative skin permeation of diclofenac diethylamine per surface area (mg/cm^2) from diclofenac diethylamine-TDS in hydroxypropyl methylcellulose.

R_t #	Time (hr)	Cumulative skin permeation						Mean	SD
		A	B	C	D	E	F		
11	0	0	0	0	0	0	0	0	0
	0.5	0.008	0.010	0.012	0.012	0.013	0.015	0.012	0.002
	1	0.010	0.011	0.012	0.014	0.014	0.019	0.013	0.003
	2	0.011	0.011	0.013	0.014	0.015	0.020	0.014	0.003
	3	0.012	0.012	0.014	0.014	0.015	0.020	0.014	0.003
	4	0.012	0.013	0.015	0.014	0.016	0.020	0.015	0.003
	5	0.012	0.013	0.015	0.014	0.016	0.020	0.015	0.003
	6	0.014	0.013	0.015	0.014	0.017	0.021	0.016	0.003
	8	0.015	0.015	0.016	0.016	0.017	0.024	0.017	0.003
	10	0.016	0.017	0.018	0.019	0.020	0.026	0.019	0.004
	12	0.018	0.018	0.020	0.021	0.021	0.028	0.021	0.004
12	0	0	0	0	0	0	0	0	0
	0.5	0.007	0.007	0.011	0.013	0.014	0.016	0.011	0.004
	1	0.007	0.008	0.011	0.013	0.014	0.016	0.012	0.004
	2	0.007	0.009	0.011	0.013	0.014	0.016	0.012	0.003
	3	0.007	0.009	0.011	0.013	0.014	0.017	0.012	0.003
	4	0.008	0.010	0.011	0.013	0.015	0.017	0.012	0.003
	5	0.008	0.009	0.011	0.013	0.015	0.017	0.012	0.004
	6	0.008	0.009	0.013	0.013	0.015	0.018	0.013	0.004
	8	0.009	0.012	0.013	0.015	0.017	0.019	0.014	0.004
	10	0.011	0.012	0.013	0.015	0.017	0.021	0.015	0.004
	12	0.011	0.013	0.015	0.016	0.018	0.024	0.016	0.004
13	0	0	0	0	0	0	0	0	0
	0.5	0.006	0.009	0.010	0.011	0.013	0.015	0.011	0.003
	1	0.007	0.009	0.010	0.011	0.014	0.016	0.011	0.003
	2	0.007	0.009	0.010	0.011	0.014	0.016	0.011	0.003
	3	0.007	0.009	0.010	0.011	0.014	0.016	0.011	0.003
	4	0.007	0.009	0.010	0.011	0.014	0.016	0.011	0.003
	5	0.007	0.009	0.010	0.011	0.014	0.016	0.011	0.003
	6	0.007	0.010	0.010	0.012	0.014	0.017	0.012	0.003
	8	0.008	0.010	0.011	0.013	0.015	0.017	0.012	0.003
	10	0.008	0.010	0.012	0.014	0.016	0.017	0.013	0.003
	12	0.009	0.010	0.012	0.015	0.016	0.018	0.013	0.003

Table 22 Paw edema volume (ml) after applied with Voltaren® emulgel and formulated patch for 3 and 12 hours inducd by carrageenan in Wistar rat.

		T_0	T_3	Edema			
	No.	C	C	Volume	Mean	SD	
Control group	1	1.10	1.44	0.34	0.51	0.10	
	2	1.15	1.76	0.61			
	3	1.19	1.62	0.43			
	4	1.15	1.74	0.59			
	5	1.09	1.71	0.62			
	6	1.11	1.71	0.60			
	7	1.15	1.62	0.47			
	8	1.26	1.76	0.50			
	9	1.18	1.57	0.39			
	10	1.22	1.81	0.59			
		time of application = 3 hrs					
		T_0	T_3	Edema			
	No.	C	C	Volume	Mean	SD	%inhibition
Voltaren® emulgel group	1	1.23	1.69	0.46	0.34	0.15	34.82
	2	1.32	1.23	-0.09			
	3	1.12	1.12	0.00			
	4	0.91	1.38	0.47			
	5	1.08	1.27	0.19			
	6	1.17	1.39	0.22			
		time of application = 3 hrs					
		T_0	T_3	Edema			
	No.	C	C	Volume	Mean	SD	%inhibition
Patch group	1	1.02	1.01	-0.01	0.20	0.14	61.09
	2	1.04	1.21	0.17			
	3	1.01	1.40	0.39			
	4	1.15	1.23	0.08			
	5	1.13	1.43	0.30			
	6	1.14	1.20	0.06			

Table 22 Paw edema volume (ml) after applied with Voltaren® emulgel and formulated patch for 3 and 12 hours inducd by carrageenan in Wistar rat (continue).

		time of application = 12 hrs					
		T_0	T_3	Edema			
	No.	C	C	Volume	Mean	SD	%inhibition
Voltaren® emulgel group	1	1.03	1.08	0.05	0.44	0.29	14.72
	2	1.10	1.24	0.14			
	3	1.23	1.68	0.45			
	4	1.19	1.75	0.56			
	5	1.15	1.82	0.67			
	6	1.13	1.89	0.76			
		time of application = 12 hrs					
		T_0	T_3	Edema			
	No.	C	C	Volume	Mean	SD	
Patch group	1	1.21	1.34	0.13	0.13	0.07	74.32
	2	1.20	1.28	0.08			
	3	1.09	1.33	0.24			
	4	1.01	1.09	0.08			
	5	1.18	1.08	-0.10			
	6	1.11	1.24	0.13			

Remark : C = carrageenan injected, , T_0 = before injection, T_3 = 3 hours after injection ,

VITAE

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