



Figure 1. The individual unit disposition functions (the C_p is calculated assuming a unit dose of 1 unit of drug) for the 12 subjects. The insert expands the first 2 h.

Table 1. Demographic data

Subject	Age (yrs)	Gender	Weight (kg)	Height (cm)
1	34	Male	66	170
2	32	Male	82	184
3	24	Male	85.2	188
4	23	Female	69	168
5	25	Male	75	180
6	28	Female	60	163
7	29	Male	88	188
8	33	Male	59.5	173
9	21	Female	64.5	163
10	30	Female	59	172
11	26	Female	60	170
12	24	Female	69.5	168
Mean	27.4		69.8	173.9
SD	4.2		10.5	8.9
Minimum	21		59	163
Maximum	34		88	188

Table 2. Individual parameters of the disposition function after intravenous administration of hydromorphone.

Subject	V1	K10	K12	K13	K21	K31
1	10.8	0.147	0.275	0.0308	0.0369	0.00203
2	11.1	0.155	0.346	0.0683	0.0317	0.00101
3	14.8	0.129	0.268	0.0294	0.0307	0.00075
4	14	0.152	0.233	0.0249	0.0255	0.00087
5	13.2	0.09	0.26	0.0594	0.0213	0.00007
6	10.2	0.02	0.356	0.141	0.0404	0.0001
7	11.6	0.06	0.582	0.127	0.0348	0.00004
8	14.1	0.016	0.286	0.124	0.0323	0.00008
9	10.4	0.012	0.266	0.2	0.0284	0.00005
10	10.8	0.179	0.177	0.0258	0.0237	0.00162
11	8.7	0.192	0.319	0.0661	0.0333	0.00419
12	10.8	0.18	0.24	0.0548	0.0253	0.00108
Mean	11.5	0.116	0.3	0.08	0.03	0.00095
SD	1.82	0.068	0.1	0.05	0.005	0.00116

Volume of the first compartment (V1) is expressed in liters, the micro-rate constants, K10, K12, K13, K21, and K31 have units min^{-1} .

Table 3. Individual Subject Bioavailability data.

Subject	Bioavailability			
	IR	8mg OROS [®]	16 mg OROS [®]	32 mg OROS [®]
1	0.156	0.175	0.199	0.184
2	0.294	0.482	0.466	0.363
3	0.212	0.276	0.214	0.298
4	0.128	0.298	0.226	0.117
5	0.262	0.341	0.304	0.307
6	0.213	0.315	0.197	0.163
7	0.18	0.32	0.291	0.312
8	0.182	0.245	0.251	0.186
9	0.163	0.196	0.264	0.245
10	0.108	0.176	0.181	0.201
11	0.275	0.24	0.297	0.189
12	0.159	0.167	0.184	0.178
Mean	0.194	0.269	0.256	0.229
Std Dev	0.059	0.091	0.08	0.075

Bioavailability was calculated using the area from observed concentrations vs. time by the log-linear trapezoidal rule.