VERSION 3.15

VOLUME 1

INSTALLATION & QUICK REFERENCE

Fourth Print (20-12-1997)

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1 INTRODUCTION

First of all we want to congratulate you with the purchase of MW\PHARM version 3.15. We are sure that the program will be of great help to you for dealing with routine pharmacokinetic problems that you are confronted with in daily practice. However, the new extensions in MW\PHARM 3.15 will also help you to tackle problems which are less common such as the pharmacokinetics of drugs during dialysis and hemoperfusion. The program is of course also very suitable for teaching and training in several biomedical disciplines.

The MW\PHARM program is completely unprotected. We therefore ask you friendly to take into account the copyright laws of your country. You are only allowed to make one backup copy for personal use. MediWare offers attractive site licenses for multiple installations at your institute.

If you have any remarks or suggestions please do not hesitate to contact us by phone, fax or e-mail.

Yours Sincerely,

Eddy van Essen
Managing Director
MediWare B.V.

2 INSTALLATION

2.1 System Requirements

On order to run MW\PHARM, your system must include the following:

- IBM PC/AT or compatible computer.
- 512 Kb free memory.
- 1.0 Mb free harddisk space.
- MS-DOS 3.3 or higher.

2.2 Installation Procedure

In order to install MW\PHARM you must do the following:

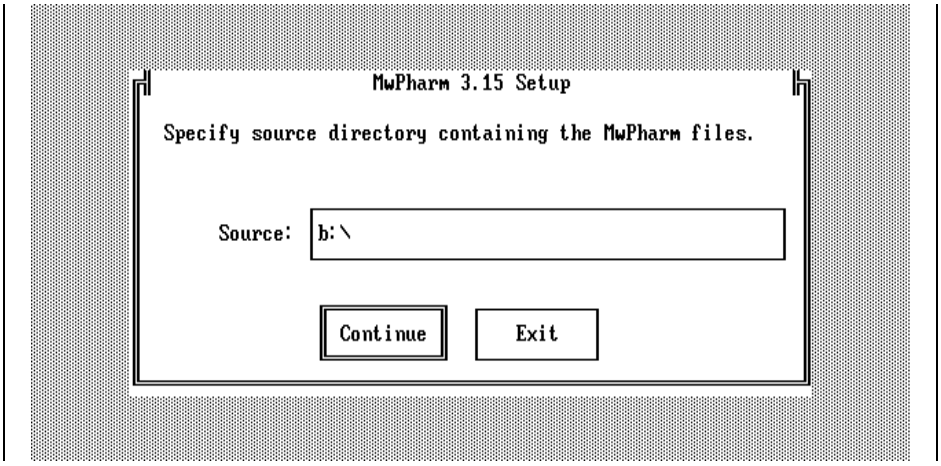
① **Insert the installation diskette into the proper floppy disk drive.**

② Type A : S E T U P or B : S E T U P at the DOS prompt, depending on where you inserted the installation diskette.

The following screen will appear:

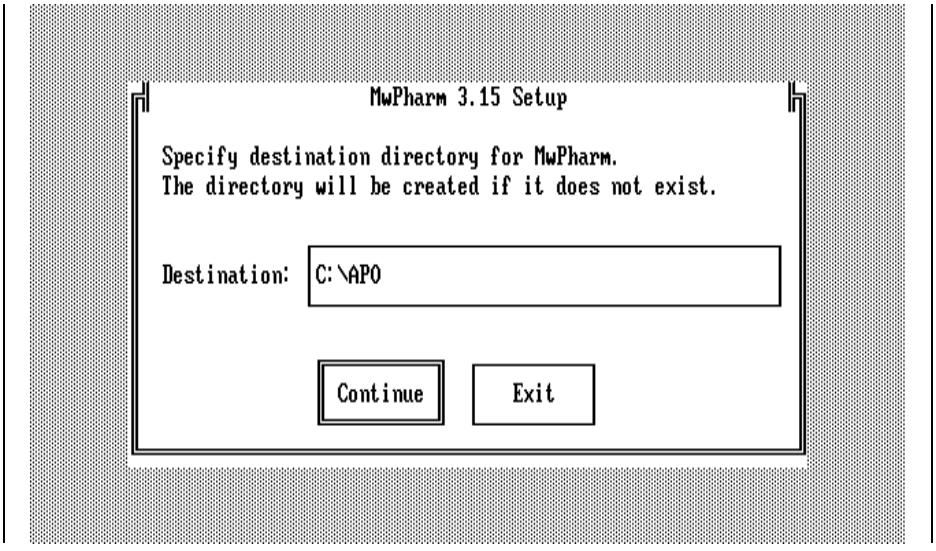
③ **Press Enter in order to continue.**

Your screen should now look like the one below. This screen allows you to change the source drive and directory. The default settings should be correct.



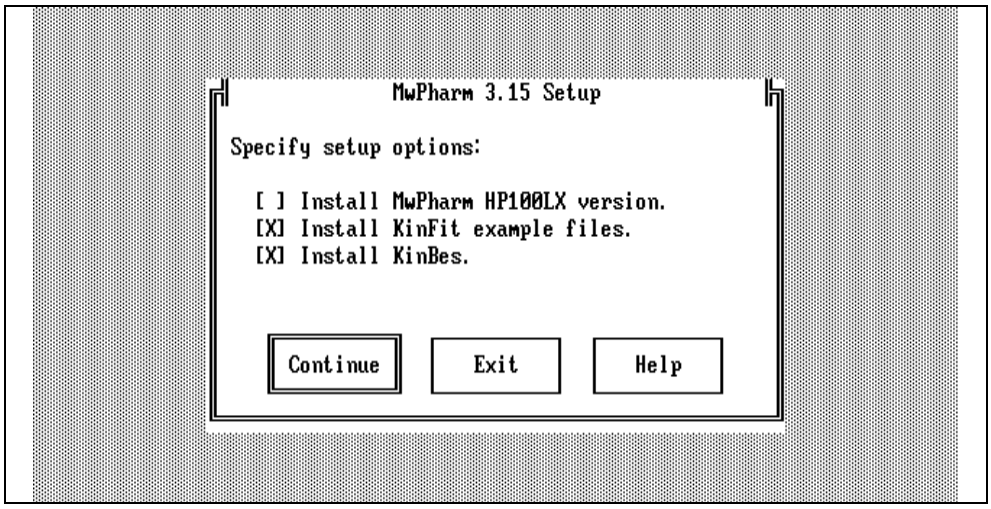
④ **If necessary modify the source drive and press Enter.**

The next screen allows you to specify a destination drive and directory. You are free to specify any available drive and directory name here. However, we strongly advise you to use APO as the default destination directory name.



⑤ If necessary modify the destination drive and press Enter.

The next screen allows you to select the program components you require.



⑥ After selecting the required program components press Enter

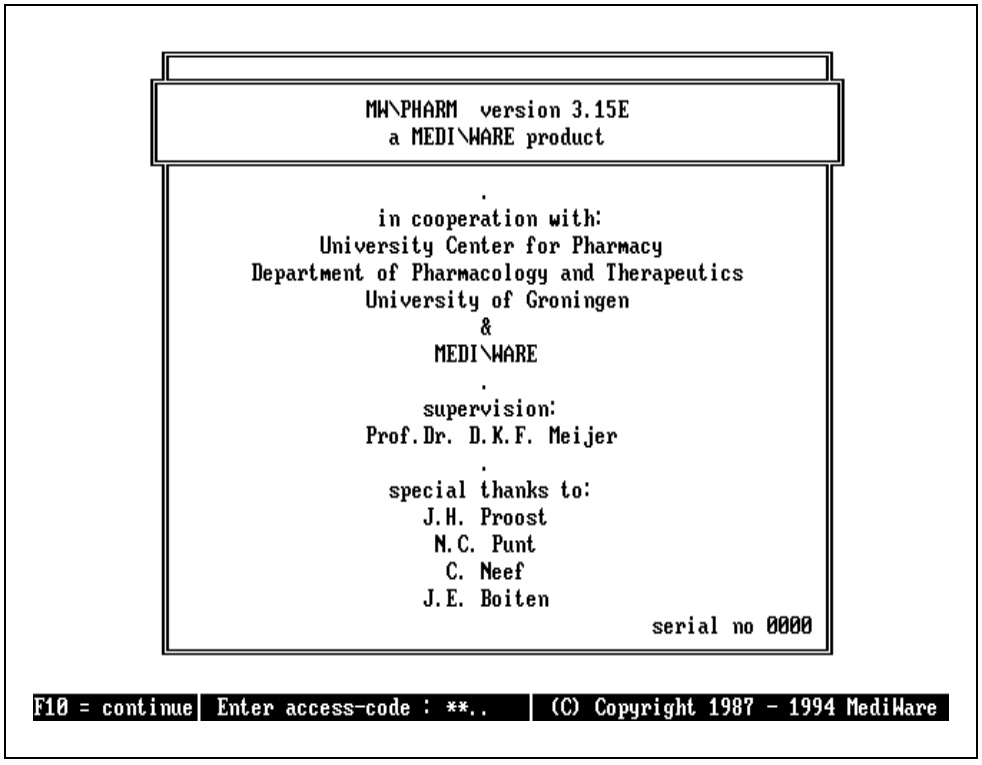
The installation program will start copying the files from the specified source to the specified destination path. A progress indicator shows the current installation status.

When the installation is complete the following screen will be displayed:

⑦ **Press** Enter **in order to return to the DOS-prompt.**

⑧ **Type** A P O **at the DOS-prompt in order to start MW\PHARM**.

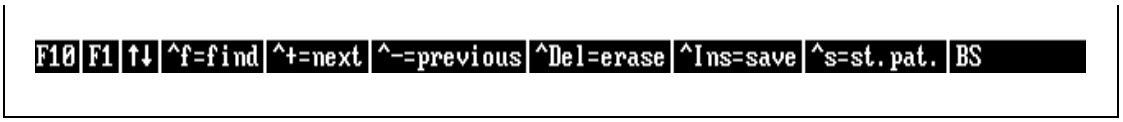
The MW\PHARM opening screen will appear. Please consult the volume 2 (Tour de Pharm) manual for a tour around the program. The next chapter (chapter 3) lists the keyboard commands which are available in the most important MW\PHARM screens (quick reference).



3 QUICK REFERENCE

3.1 Introduction

Most keyboard commands are listed at the bottom of every screen:



In all manuals keyboard keys are represented by symbols enclosed by a rectangle. E.g. F1 represents the F1 function key on your keyboard. If two keys are separated by a + sign you will have to press these keys simultaneously. In all other cases you will have to press the keys sequentially (typing). Examples are:

Ctrl + F6 ***Press the Ctrl and the F6 key simultaneously***.

A P O ***Press the A, P and O keys sequentially***.

Note that the MwPharm program uses the ^ symbol as a short hand notation for the Ctrl key. Thus if the command line in a MwPharm screen displays ^P this means you need to press Ctrl + P.

3.2 All Screens

The following commands are available in all MwPharm screens:

F1 ***Stop/abort and return to main menu***

F10 ***Go to the next (sub) menu in sequence***

Ctrl + P ***Print current text or graphics screen***

↑ ↓ ← → ***Navigate cursor to different input fields***

Esc ***Clear current input field***

Enter ***Confirm data entry in current input field***

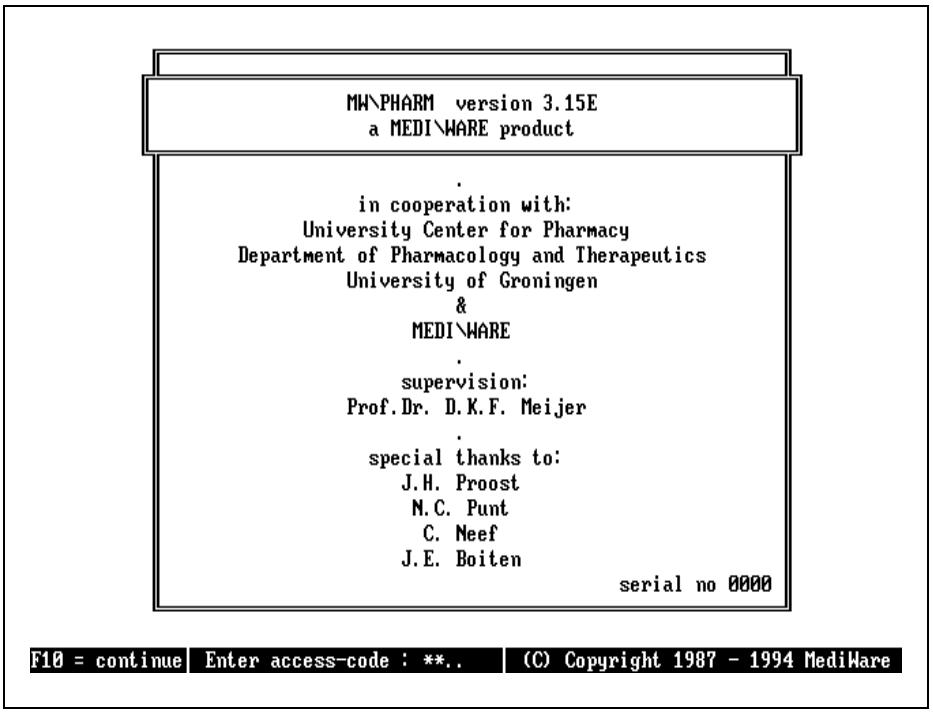
3.3 DOS Prompt

```
C:\>cd apo
C:\APO>apo
```

Change to the MwPharm directory by typing: C D A P O

Start MwPharm by typing: A P O

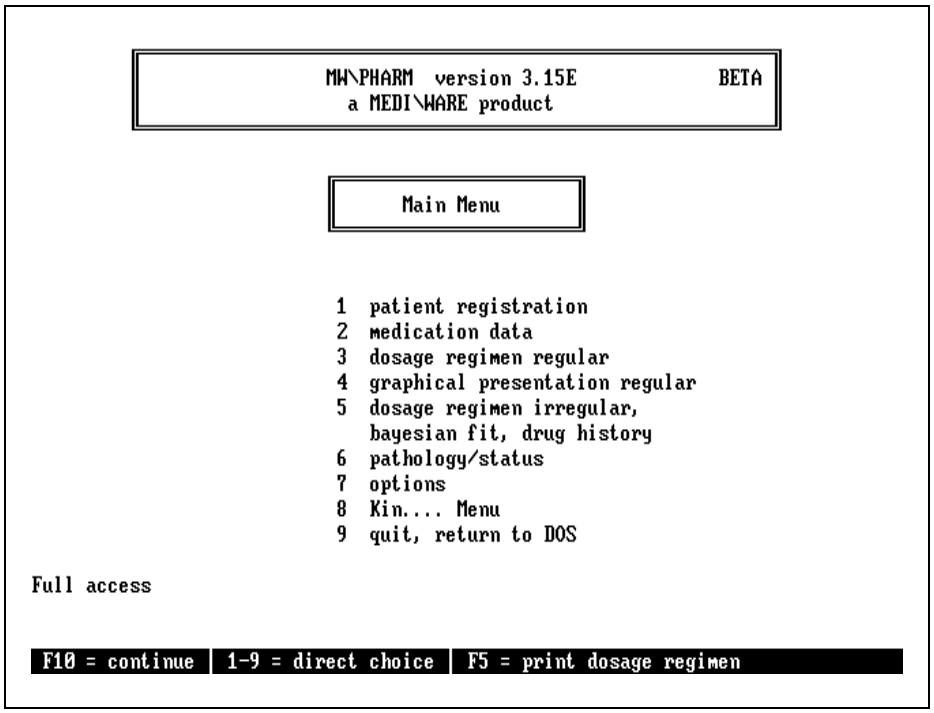
3.4 Opening Screen



To gain full access type: 4 4 4 4

To go to the main menu type: F10 or Enter

3.5 Main Menu

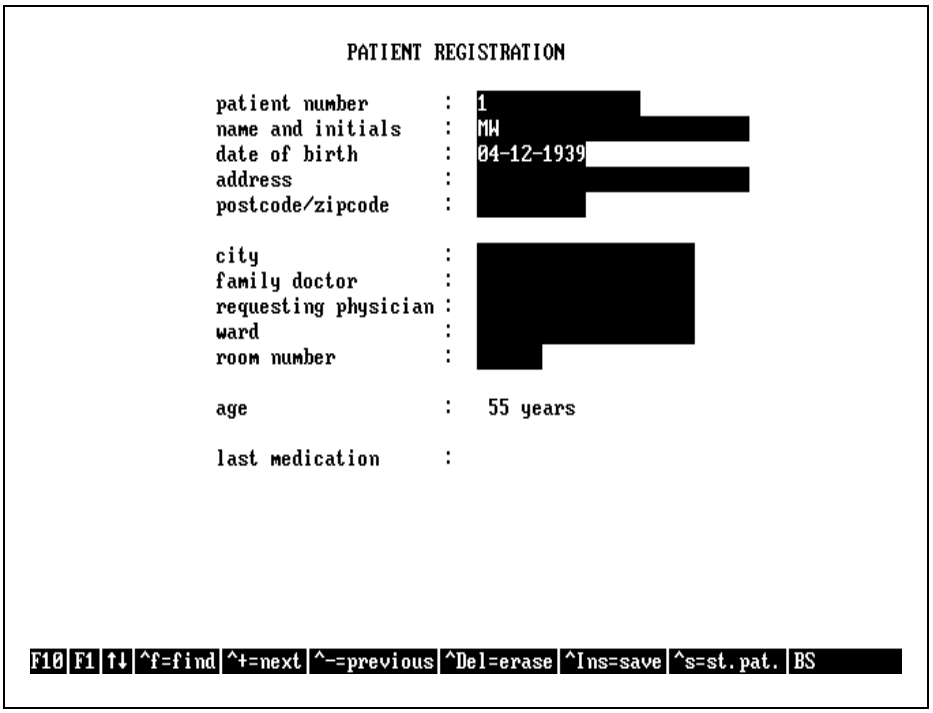


1 - 9 ***Go to submenu***

F10 ***Go to the patient registration screen***

F5 ***Print current dosage advice***

3.6 Patient Registration Screen



F1 ***Return to main menu***

F10 ***Go to the pathology screen***

↑ ↓ ***Navigate cursor to different input fields***

Esc ***Clear current input field***

Ctrl + S ***Recall standard patient***

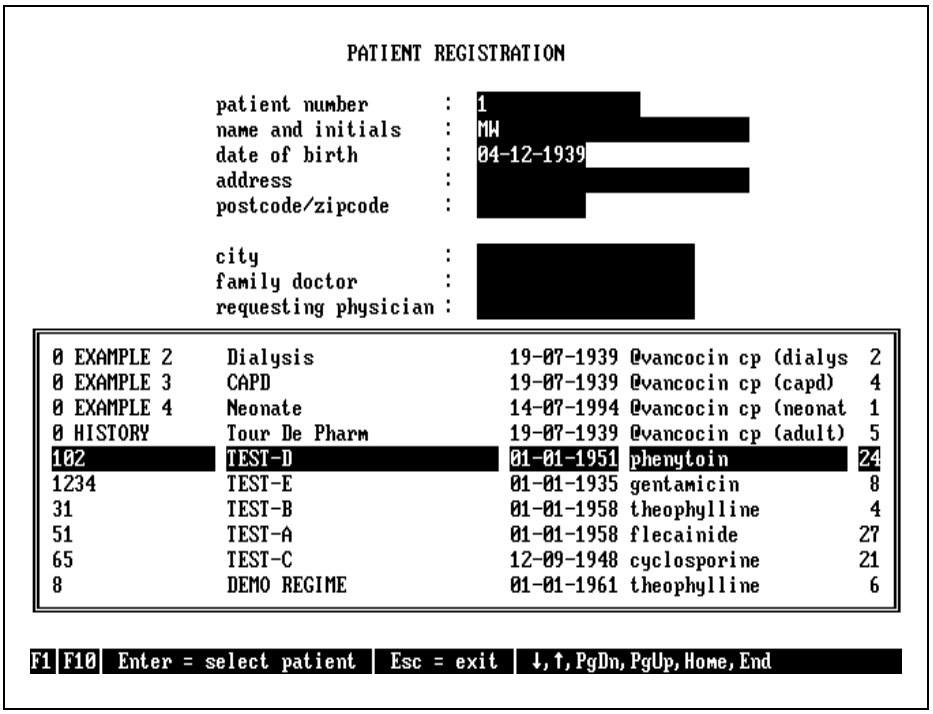
Ctrl + + ***Recall next patient***

Ctrl + - ***Recall previous patient***

Ctrl + F ***Open patient browse window***

Ctrl + Insert ***Save current patient***

Ctrl + Delete ***Delete current patient***



F1 ***Return to main menu (no selection)***

F10 ***Go to the pathology screen (no selection)***

↑ ↓ ***Move up/down 1 patient***

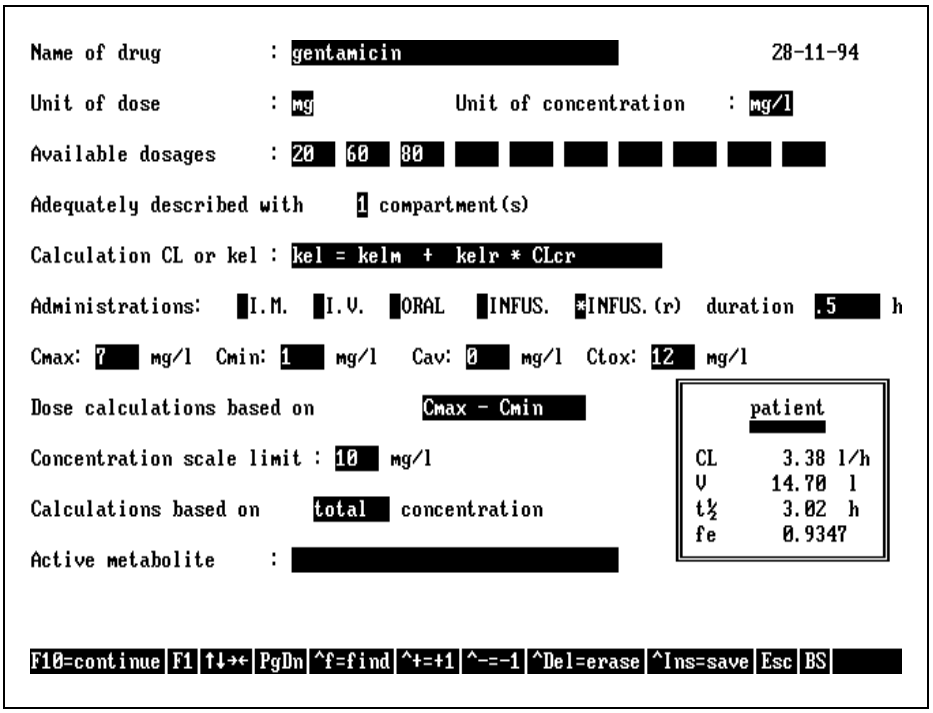
Page Up Page Down ***Move up/down 10 patients (1 page)***

Home End ***Move to first/last patient***

Enter ***Recall highlighted patient***

Esc ***Close browse window (no selection)***

3.7 Medication Data Screen



F1 ***Return to main menu***

F10 ***Go to the dosage regimen screen***

↑ ↓ ← → ***Navigate cursor to different input fields***

␣ ***Toggle value of option field***

Esc ***Clear current input field***

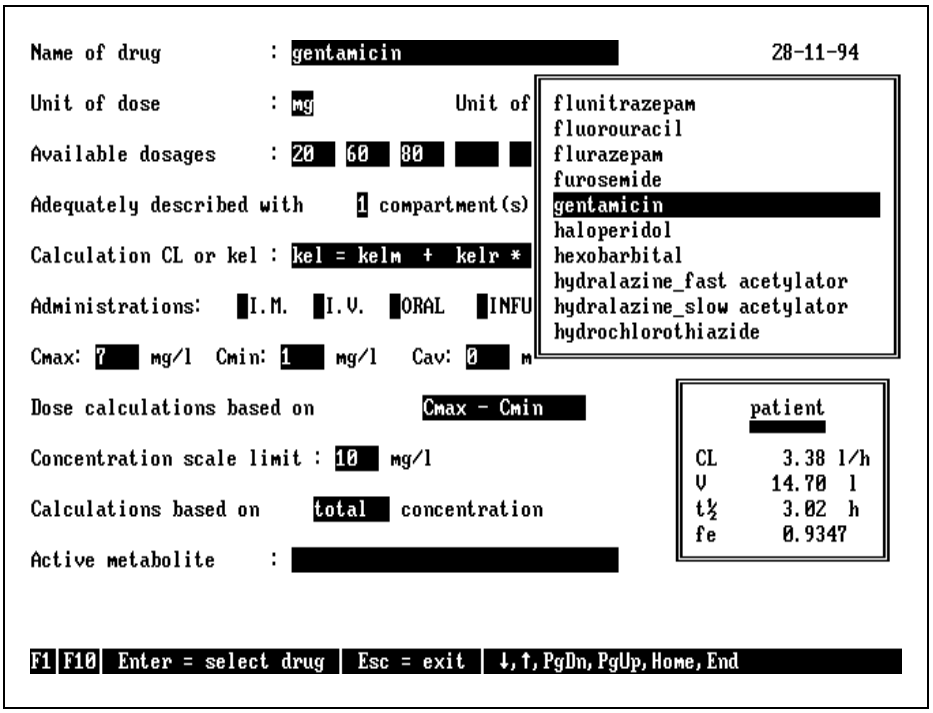
Ctrl + + ***Recall next drug***

Ctrl + - ***Recall previous drug***

Ctrl + F ***Open drug browse window***

Ctrl + Insert ***Save current drug***

Ctrl + Delete ***Delete current drug***



F1 ***Return to main menu (no selection)***

F10 ***Go to the dosage regimen screen (no selection)***

↑ ↓ ***Move up/down 1 drug***

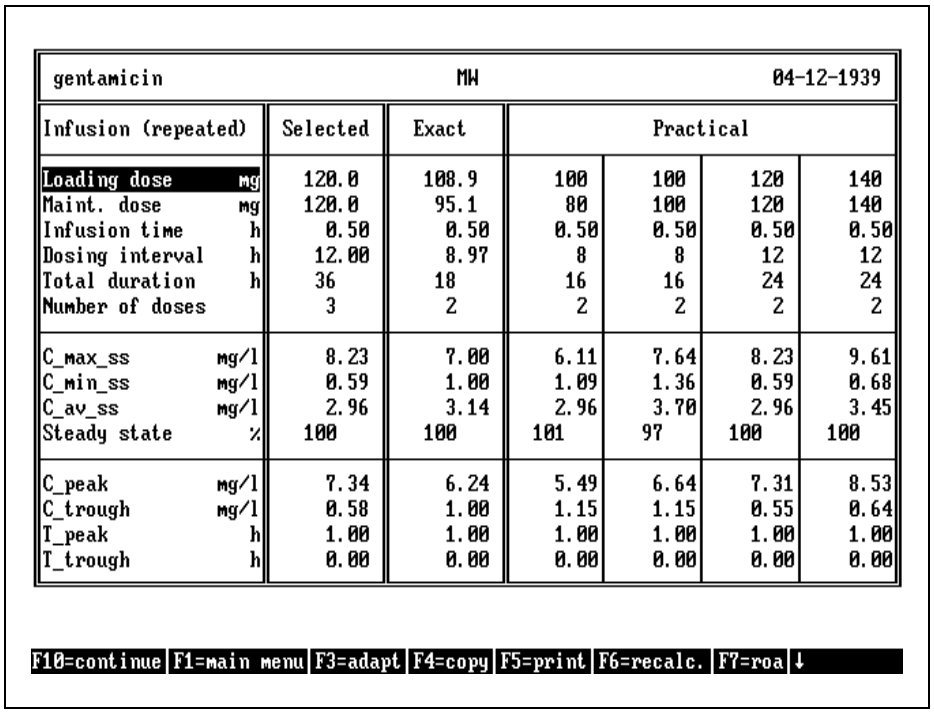
Page Up Page Down ***Move up/down 10 drugs (1 page)***

Home End ***Move to first/last drug***

Enter ***Recall highlighted drug***

Esc ***Close browse window (no selection)***

3.8 Drug Dosage Screen



gentamicin MW 04-12-1939

Infusion (repeated)		Selected	Exact	Practical			
Loading dose	mg	120.0	108.9	100	100	120	140
Maint. dose	mg	120.0	95.1	80	100	120	140
Infusion time	h	0.50	0.50	0.50	0.50	0.50	0.50
Dosing interval	h	12.00	8.97	8	8	12	12
Total duration	h	36	18	16	16	24	24
Number of doses		3	2	2	2	2	2
C_max_ss	mg/l	8.23	7.00	6.11	7.64	8.23	9.61
C_min_ss	mg/l	0.59	1.00	1.09	1.36	0.59	0.68
C_av_ss	mg/l	2.96	3.14	2.96	3.70	2.96	3.45
Steady state	%	100	100	101	97	100	100
C_peak	mg/l	7.34	6.24	5.49	6.64	7.31	8.53
C_trough	mg/l	0.58	1.00	1.15	1.15	0.55	0.64
T_peak	h	1.00	1.00	1.00	1.00	1.00	1.00
T_trough	h	0.00	0.00	0.00	0.00	0.00	0.00

F10=continue | F1=main menu | F3=adapt | F4=copy | F5=print | F6=recalc. | F7=roa | ↓

F1 ***Return to main menu***

F10 ***Go to the simulation graphics screen***

↑ ↓ ***Navigate cursor to different input fields***

F3 ***Adapt dose to interval or vice versa***

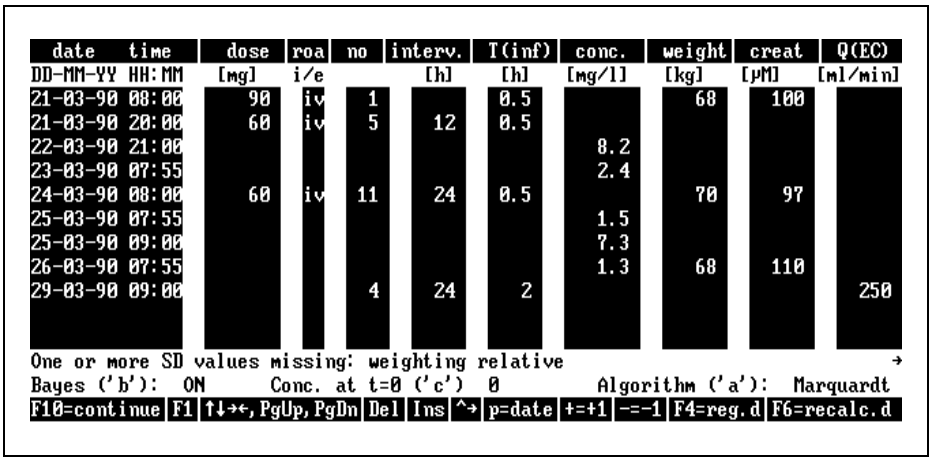
F4 ***Select exact or 1 of 4 practical dosage regimens***

F5 ***Print current dosage advice***

F6 ***Initiate & complete 2-point recalculation***

F7 ***Select next available route of administration***

3.9 Medication History Screen



F1 — ***Return to main menu***

F10 — ***Go to the simulation graphics screen***

↑ ↓ ← → — ***Navigate cursor to different input fields***

Page Up / Page Down — ***Move up/down 1 screen page***

Insert / Delete — ***Delete/Insert current line***

Ctrl + → — ***Change default data input direction***

P — ***Enter {current date}*** (H ***for German and Dutch***)

= / + / - — ***Enter {last date} / {last date +1} / {last date -1}***

F4 — ***Insert initial regular dosage regimen***

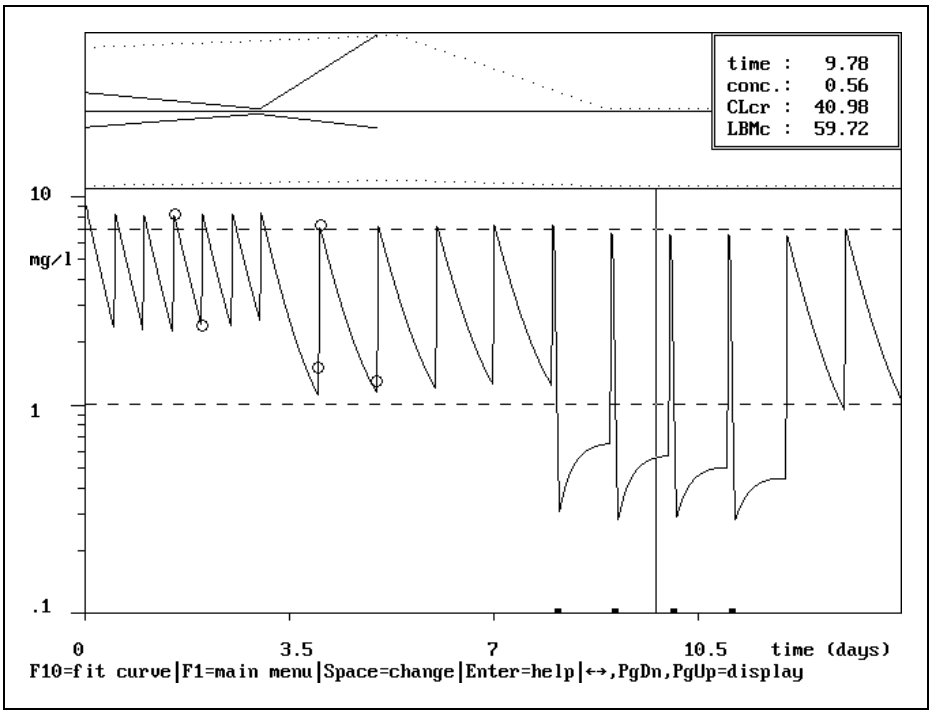
F6 — ***Insert recalculated regular dosage regimen***

A — ***Change fitting algorithm (Marquardt or Simplex)***

B — ***Switch Bayes ON or OFF (population feedback)***

C — ***Switch fitting of C(0) ON or OFF***

3.10 Simulation Graphics Screen



F1 ***Return to main menu***

F10 ***Fit medication history***

␣ ***Return to dosage regimen screen***

Enter ***Display help window***

← → ***Move read-out cursor (fine control)***

Page Up Page Down ***Move read-out cursor (coarse control)***

F2 ***Display total amount in body window***

F6 ***Display curve read-out window***

F7 ***Display patient data window***

F8 ***Display kinetic parameter window***

F9 ***Display dosage regimen window***

M	***Display metabolite concentration***
U	***Display unbound or total concentration***
E	***Export curves and data points***
X	***Change X-axis scaling (hours vs days)***
Y	***Change Y-axis scaling (linear vs log)***
Esc	***Cancel text editor mode***

Language mode dependent keys:

English	German	Dutch	
S	S	B	***Save displayed curve***
D	L	W	***Delete saved curve***
R	Z	T	***Retrieve saved curve***
C	F	K	***Switch colors ON or OFF***
P	D	P	***Print fit results***
T	T	S	***Start text editor mode***

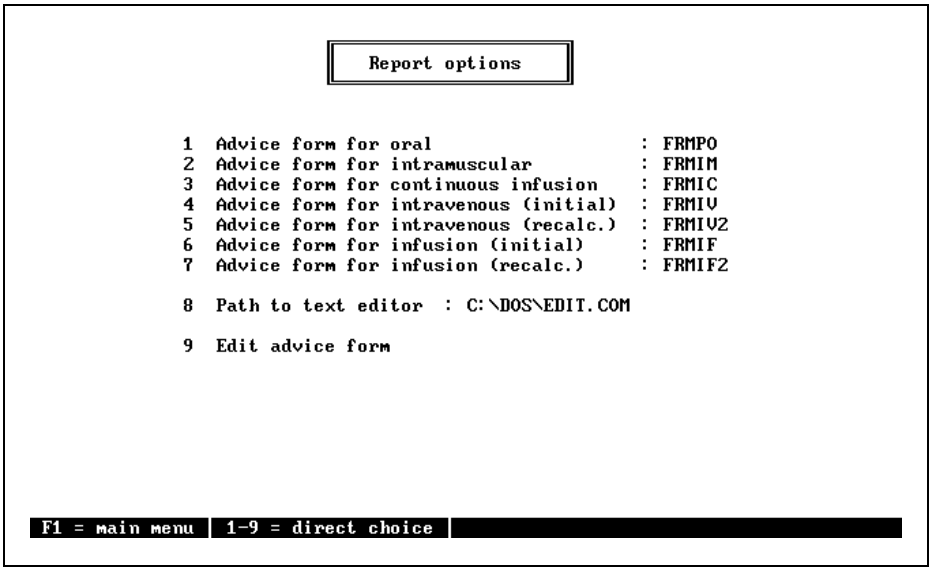
3.11 Dosage Advice Report Generation

The contents and lay-out of a printed dosage advice using F5 is completely definable by the user. The reports are defined in plain ASCII text files. The default filenames for the different routes of administration are:

Filename[1]	**R.O.A. Report**
FRMPO .XXX	po
FRMIM .XXX	im
FRMIV .XXX	iv bolus (initial)
FRMIV2.XXX	iv bolus (after recalculation using F6)
FRMIF .XXX	iv infusion rep. (initial)
FRMIF2.XXX	iv infusion rep. (after recalculation using F6)
FRMIC .XXX	iv infusion con.

[1]The filename extension **XXX** is language dependent: **ENG** for the English, **DEU** for the German and **NED** for the Dutch language mode.

When using the standard report forms supplied with MW\PHARM the produced output is virtually identical to that of previous MW\PHARM versions. The lay-out and contents of a report form can be adjusted or created by editing the default report forms or by creating an entire new one from scratch. A new report from can be registered in the report options screen.



3.11.1 Creating new report forms

The lay-out and contents of a report form can be adjusted or created by using the following procedure:

① **Backup original report forms**

If you do not plan to assign a new file name to the new form (option menu 2), copy the supplied form files (FRM*.*) to some safe location (e.g. a subdirectory called FORM).

② **Select and start a suitable text editor**

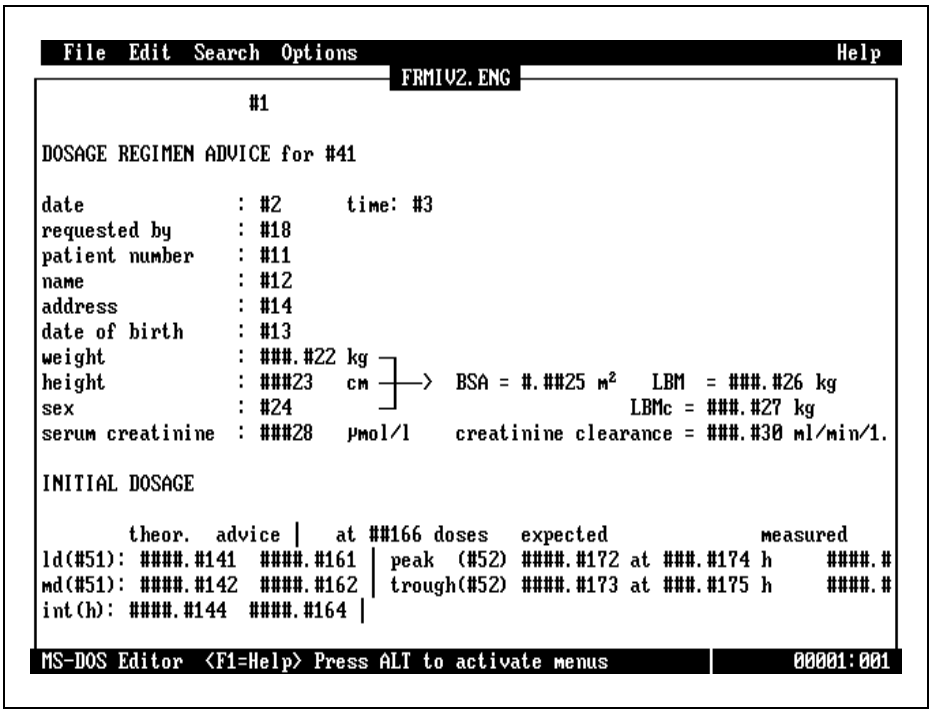
In principle any text editor can be used, e.g. EDIT.EXE which is supplied with MSDOS, or WordPerfect. The editor can be launched from within the report options screen in MW\PHARM (option menu 2).

③ **Create new report form or edit existing form**

The new form can be created from scratch or can be based on an existing form (e.g. on one of the supplied default files). See paragraph 4.5.2 for more information about the rules for creating a new form.

④ **Save new report form**

Write the form file to disk. If you changed the form name, specify the this new name (options menu 2). You must explicitly save the document as ASCII-file (also DOS-text) if you use a general purpose word processor. In case of WordPerfect 5.1 press Ctrl+F5, 3, 1 in order to save the file in ASCII-format.



3.11.2 Report form formatting rules

Numeric variables:

The format of numeric variables is composed by '#' characters. E.g. if a number must be printed using maximally 3 digits before and exactly 2 digits after the decimal point (e.g. '2.34') use '###.##'

Variables are identified by a numeric code which must directly follow the format specifier (e.g. '###.#22' for patient weight). A table of available variables with their corresponding codes is displayed at the end of this chapter (Appendix A).

For example: '###.##111' means print the value for the peak concentration with 2 digits after the decimal, point with a total width of 6 digits (Note: the variable id-code itself does not influence the total width).

Comments:

Free text fields for adding comments (at print time) can be inserted using the '#C' code. After issuing a print command using F5 the program will stop printing when it encounters the '#C' code giving the user the opportunity to enter text. This code can be inserted at any location of the form text.

Printer codes:

Printer control codes can be inserted using the code '#P' followed by control codes expressed as decimal ASCII-values, separated by commas and terminated by an additional '#' character. E.g. '#P27,64#' for printer control codes 27 (escape) and 64 (@) (Note: printer control codes do not influence the total width).

APPENDIX A

Dosage Report Variable Codes

CODE	DESCRIPTION
1	user name
2	date DD-MM-YYYY
3	time HH:MM
11	patient number
12	patient name
13	date of birth
14	street
15	zipcode
16	city
17	family doctor
18	requesting physician
19	ward
20	room number
21	age (years)
22	weight (kg)
23	height (cm)
24	sex (M of F)
25	body surface area BSA (m^2)

CODE	DESCRIPTION
26	LBM (kg)
27	LBMc (kg)
28	serum creatinine (µM)
29	serum creatinine (mg/dl)
30	creatinine clearance (ml/min/1.73m²)
31	creatinine clearance (ml/min)
41	drug name
51	dose unit
52	concentration unit
61	clearance (l/h)
62	volume (of distribution) (l)
63	half-life (h) (terminal half-life)
64	= 61 (l/h/kg lbm)
65	= 62 (l/kg lbm)
66	= 61 (l/h/kg bw)
67	= 62 (l/kg bw)
81	clearance (l/h) used for initial dose (only after recalculation)
82	volume (l) used for initial dose (only after recalculation)
83	half-life (h) used for initial dose (only after recalculation)
84	= 81 (l/h/kg lbm)
85	= 82 (l/kg lbm)
86	= 81 (l/h/kg bw)
87	= 82 (l/kg bw)
91	waiting before dose adjustment (only after recalculation)
92	new loading dose (only after recalculation)
100	route of administration

CODE					DESCRIPTION
exact regimen					
¦	**selected/given regimen**				
¦	¦	**initial exact regimen** (only after recalculation)			
¦	¦	¦	**initial selected/given regimen** (only after recalculation)		
¦	¦	¦	¦	**measured concentrations** (only after recalculation)	
¦	¦	¦	¦	¦	
101	121	141	161	¦	loading dose
102	122	142	162	¦	maintenance dose
103	123	143	163	¦	dosing interval
104	124	144	164	¦	infusion time
105	125	145	165	¦	total duration
106	126	146	166	¦	number of dosages
107	127	147	167	¦	C_max_ss
108	128	148	168	¦	C_min_ss
109	129	149	169	¦	C_av_ss
110	130	150	170	¦	% steady state
111	131	151	171	¦	T_max_ss
112	132	152	172	192	C_peak
113	133	153	173	193	C_trough
114	134	154	174	194	T_peak
115	135	155	175	195	T_trough[1]
116	136	156	176	196	T_trough[2]

[1]T_trough <= 0 if the trough is measured before the peak
[2]T_trough > 0 under all conditions (T_trough + T_interval when T_trough < 0).

APPENDIX B

Drug Database

drug	route Oral Intramuscular Intravenous Infusion (repeated) Continuous infusion	dose	conc.	Cmax	Cmin	Cav	compart.	date of change
!ethanol (bsa ped)	| | |*|*|*|	mg	mg/l	1000	500	750	1	12-02-1994
!ethanol (lbm ped)	| | |*|*|*|	mg	mg/l	1000	500	750	1	12-02-1994
!ethylene glycol	| | |*|*|*|	mg	mg/l	100	50	75	1	12-02-1994
!gentamycin-icu	| | | | |*|	mg	mg/l	7	1	4	1	12-02-1994
!pentazocine	|*| | | | |	mg	mg/l	.2	.05	.125	1	12-02-1994
!theophylline (ped)	| |*|*|*|*|	mg	mg/l	18	8	13	1	12-02-1994
!theophylline (sat)	| |*|*|*|*|	mg	mg/l	18	8	13	1	12-02-1994
!theophylline (tox)	| |*|*|*|*|	mg	mg/l	18	8	13	1	12-02-1994
!tobramycin-icu	| | | | |*|	mg	mg/l	12	1	6.5	1	12-02-1994
@euphylong 200/400	| | |*| | |	mg	mg/l	18	8	13	1	05-26-1993
@euphylong 250/375	| | |*| | |	mg	mg/l	18	8	13	1	05-26-1993
@obracin (adult)	| | | | |*|	mg	mg/l	8	2	5	1	06-23-1994
@obracin (pediatric)	| | | | |*|	mg	mg/l	8	2	5	1	06-23-1994
@vancocin cp (adult)	| | | | |*|	mg	mg/l	60	8	25	2	06-23-1994
@vancocin cp (capd)	| | | | |*|	mg	mg/l	60	8	25	2	06-23-1994
@vancocin cp (dialysis)	| | | | |*|	mg	mg/l	60	8	25	2	06-23-1994
@vancocin cp (neonate)	| | | | |*|	mg	mg/l	35	8	20	2	06-23-1994

acebutolol	| |*|*| | |	mg	mg/l	1.5	.5	0	1	09-03-1991
acetylsalicylic acid	| | |*| | |	mg	mg/l	300	200	0	1	09-04-1991
aciclovir	| |*| | | |	mg	mg/l	15	.5	0	1	09-03-1991
alfentanil	| |*| | | |	mg	mg/l	0	0	0	1	09-03-1991
alprenolol	| | |*| | |	mg	µg/l	100	50	0	1	09-04-1991
alprenolol_retard	| | |*| | |	mg	µg/l	100	50	0	1	09-04-1991
amikacin	|*|*| |*|*|	mg	mg/l	35	5	0	2	09-03-1991
amiodarone	| | |*| | |	mg	mg/l	3	1	0	1	09-03-1991
amitriptyline	| |*|*| | |	mg	µg/l	220	60	0	1	09-03-1991
amitriptyline_retard	| |*|*| | |	mg	µg/l	220	60	0	1	09-03-1991
amoxicillin	| |*|*| | |	mg	mg/l	5	.5	0	1	09-03-1991
ampicillin	| |*|*| | |	mg	mg/l	6	0	0	1	09-03-1991
atenolol	| |*|*| | |	mg	mg/l	1.5	1	0	1	09-03-1991
atracurium	| |*| | | |	mg	mg/l	5	.1	0	1	09-03-1991
azathioprine	| |*|*| | |	mg	µg/l	300	50	0	1	09-03-1991
benzylpenicillin	| | | | | |	mg	mg/l	10	1	0	1	09-03-1991
betamethasone	| |*|*|*| |	mg	µg/l	0	0	0	1	09-03-1991
bleomycin	| | | |*| |	mg	µg/l	0	0	0	1	09-03-1991
bretylium	|*| | | | |	mg	mg/l	1	.5	0	1	09-03-1991
caffeine	| |*|*|*| |	mg	mg/l	15	8	0	1	09-03-1991
captopril	| | |*| | |	mg	mg/l	0	0	0	1	09-03-1991
carbamazepine	| | |*| | |	mg	mg/l	9	4	0	1	09-03-1991
carbamazepine-10,11-epoxide	| | | | | |	mg	mg/l	0	0	0	1	09-03-1991
carbenicillin	| | | | | |	mg	mg/l	0	0	0	1	09-03-1991
cefalexin	| | | | | |	mg	mg/l	100	.5	0	1	09-03-1991
cefaloridin	| | | | | |	mg	mg/l	10	.5	0	1	09-03-1991
cefamandole	|*|*| | | |	mg	mg/l	40	10	0	1	09-03-1991
cefazolin	|*|*| | | |	mg	mg/l	100	.5	0	1	09-03-1991
cefotaxime	|*|*| | | |	mg	mg/l	10	.5	0	1	09-03-1991
cefoxitin	|*|*| | | |	mg	mg/l	100	.5	0	1	09-03-1991
ceftazidime	|*|*| |*| |	mg	mg/l	200	50	0	1	09-03-1991

chloramphenicol	| |*|*| | |	mg	mg/l	20	5	0	1	09-03-1991
chlordiazepoxide	| |*|*| | |	mg	mg/l	1	.7	0	1	09-03-1991
chloroquine	| |*|*| | |	mg	µg/l	100	20	0	1	09-03-1991
chlorothiazide	| | |*| | |	mg	mg/l	0	0	0	1	09-03-1991
chlorpromazine	| |*|*| | |	mg	µg/l	100	30	0	1	09-03-1991
chlorpropamide_acid urine	| | |*| | |	mg	mg/l	0	0	0	1	09-03-1991
chlorpropamide_basic urine	| | |*| | |	mg	mg/l	0	0	0	1	09-03-1991
chlortetracycline	| | | | | |	mg	mg/l	5	1	0	1	09-04-1991
chlorthalidone	| | |*| | |	mg	mg/l	10	5	0	1	09-03-1991
cimetidine	| |*|*|*| |	mg	mg/l	1	.5	0	1	09-03-1991
cisplatin	|*| | | | |	mg	mg/l	5	.5	0	1	09-03-1991
clindamycin	| |*|*|*| |	mg	mg/l	0	0	0	1	09-03-1991
clofibrate	| | |*| | |	mg	mg/l	60	30	0	1	09-03-1991
clonazepam	| |*|*|*| |	mg	µg/l	60	30	0	1	09-03-1991
clonidine	| |*|*|*| |	mg	µg/l	1	.5	0	1	09-03-1991
clonidine_retard	| |*|*|*| |	mg	µg/l	1	.5	0	1	09-03-1991
clorazepate	| |*|*| | |	mg	mg/l	.75	.25	0	1	09-03-1991
cloxacillin	| |*|*| | |	mg	mg/l	15	5	0	1	09-03-1991
cocaine	| |*|*| | |	mg	mg/l	0	0	0	1	09-03-1991
colistin	| | | | | |	mg	mg/l	0	0	0	1	09-03-1991
cyclophosphamide	| |*|*|*| |	mg	mg/l	25	10	0	1	09-03-1991
cyclosporine	| |*|*|*| |	mg	mg/l	.7	.4	0	2	09-03-1991
cytarabine	| | | | | |	mg	µg/l	500	50	0	1	09-03-1991
dapsone	| | | | | |	mg	mg/l	5	.5	0	1	09-03-1991
desipramine	| | | | | |	mg	µg/l	150	75	0	1	09-03-1991
dexamethasone	| | | | | |	mg	mg/l	0	0	0	1	09-03-1991
diazepam	| |*|*|*|*|	mg	µg/l	750	500	0	1	09-03-1991
diazoxide	| | | | | |	mg	mg/l	22	8	0	1	09-03-1991
dicloxacillin	| | | | | |	mg	mg/l	0	0	0	1	09-03-1991
digitoxin	| | | | | |	mg	µg/l	25	13	0	1	09-03-1991
digoxin	| |*|*| | |	µg	µg/l	2.2	.9	0	1	09-03-1991

diltiazem						mg	µg/l	200	50	0	1	09-03-1991
diphenhydramine						mg	µg/l	100	25	0	1	09-03-1991
disopyramide						mg	mg/l	7	2.5	0	1	09-03-1991
dobutamine						mg	mg/l	0	0	0	1	09-03-1991
doxepin						mg	µg/l	250	100	0	1	09-03-1991
doxorubicin						mg	µg/l	20	6	0	1	09-03-1991
doxycycline						mg	mg/l	10	5	0	1	09-03-1991
erythromycin						mg	mg/l	0	0	0	1	09-03-1991
ethambutol						mg	mg/l	10	0	0	1	09-03-1991
ethanol			*	*	*	mg	mg/l	1000	500	750	1	09-02-1991
ethosuximide						mg	mg/l	80	40	0	1	09-03-1991
fentanyl						mg	µg/l	1	0	0	1	09-03-1991
flecainide		*	*	*		mg	mg/l	1	.2	0	2	09-03-1991
flucytosine						mg	mg/l	50	25	0	1	09-03-1991
flunitrazepam						mg	µg/l	15	5	0	1	09-03-1991
fluorouracil						mg	mg/l	10	.1	0	1	09-03-1991
flurazepam						mg	µg/l	10	1	0	1	09-03-1991
furosemide						mg	mg/l	25	0	0	1	09-03-1991
gentamicin					*	mg	mg/l	7	1	0	1	11-28-1994
haloperidol						mg	µg/l	40	15	0	1	09-03-1991
hexobarbital						mg	mg/l	10	4	0	1	09-03-1991
hydralazine_fast acetylator						mg	mg/l	100	50	0	1	09-03-1991
hydralazine_slow acetylator						mg	mg/l	100	50	0	1	09-03-1991
hydrochlorothiazide						mg	mg/l	0	0	0	1	09-03-1991
ibuprofen						mg	mg/l	30	15	0	1	09-03-1991
imipramine						mg	µg/l	150	45	0	1	09-03-1991
indomethacin						mg	mg/l	2.5	.8	0	1	09-03-1991
isoniazid_fast acetylator						mg	mg/l	8	.2	0	1	09-03-1991
isoniazid_slow acetylator						mg	mg/l	8	.2	0	1	09-03-1991
isosorbide dinitrate_cutaneous						mg	mg/l	0	0	0	1	09-04-1991
isosorbide dinitrate_oral						mg	mg/l	0	0	0	1	09-04-1991

isosorbide dinitrate_subling						mg	mg/l	0	0	0	1	09-04-1991
isosorbide-2-mononitrate						mg	mg/l	0	0	0	1	09-03-1991
isosorbide-5-mononitrate						mg	mg/l	100	50	0	1	09-03-1991
kanamycin	*	*		*	*	mg	mg/l	15	1	8	1	09-03-1991
ketamine						mg	mg/l	6.5	.5	0	1	09-03-1991
labetalol						mg	µg/l	200	25	0	1	09-03-1991
lidocaine						mg	mg/l	5	1.5	0	1	09-03-1991
lincomycin						mg	mg/l	0	0	0	1	09-04-1991
lithium						mg	mg/l	1.2	.6	0	1	09-03-1991
lorazepam						mg	µg/l	200	20	0	1	09-03-1991
lorcainide_100						mg	mg/l	200	40	0	1	09-03-1991
lorcainide_200						mg	mg/l	200	40	0	1	09-03-1991
melphalan						mg	mg/l	0	0	0	1	09-03-1991
mercaptopurine						mg	mg/l	2	.04	0	1	09-03-1991
methadone						mg	µg/l	80	30	0	1	09-03-1991
methicillin						mg	mg/l	0	0	0	1	09-03-1991
methotrexate						mg	mg/l	0	0	0	1	09-03-1991
methyldopa						mg	mg/l	0	0	0	1	09-03-1991
methylprednisolone						mg	mg/l	0	0	0	1	09-03-1991
metoprolol			*			mg	µg/l	250	100	0	1	09-03-1991
metronidazole			*	*	*	mg	mg/l	30	10	0	1	09-03-1991
mexiletine						mg	mg/l	2	.5	0	1	09-03-1991
mezlocillin						mg	mg/l	0	0	0	1	09-03-1991
midazolam		*	*	*	*	mg	µg/l	600	200	400	2	09-03-1991
minocycline						mg	mg/l	0	0	0	1	09-03-1991
minoxidil						mg	mg/l	0	0	0	1	09-03-1991
morphine			*	*	*	mg	µg/l	70	10	0	1	09-03-1991
nafcillin						mg	mg/l	0	0	0	1	09-03-1991
naloxone						mg	mg/l	0	0	0	1	09-03-1991
naproxen						mg	mg/l	50	20	0	1	09-03-1991
neostigmine						mg	mg/l	0	0	0	1	09-03-1991

netilmicin	|*|*|	|*|*|	mg	mg/l	8	2	0	2	09-03-1991
nicotine	| | |	| | |	mg	µg/l	35	1	0	1	09-03-1991
nifedipine	| | |	| | |	mg	µg/l	100	25	0	1	09-03-1991
nitrazepam	| | |	| | |	mg	µg/l	120	30	0	1	09-03-1991
nitroglycerin	| | |*|	| | |	mg	mg/l	11	1.2	0	1	09-03-1991
nordazepam	| | |	| | |	mg	µg/l	150	75	0	1	09-03-1991
nortriptyline	| | |	| | |	mg	µg/l	250	75	0	1	09-03-1991
oxacillin	| | |	| | |	mg	mg/l	0	0	0	1	09-03-1991
oxazepam	| | |	| | |	mg	mg/l	2	1	0	1	09-03-1991
pancuronium	| |*|	|*|*|	mg	mg/l	600	200	400	3	09-03-1991
paracetamol	| | |	| | |	mg	mg/l	20	10	0	1	09-03-1991
pentazocine	| | |*|	| | |	mg	mg/l	.2	.05	0	1	09-03-1991
pentobarbital	| |*|	|*|*|	mg	mg/l	40	20	30	2	09-03-1991
phenobarbital	| | |	| | |	mg	mg/l	40	20	0	1	09-03-1991
phenylbutazone	| | |	| | |	mg	mg/l	100	50	0	1	09-03-1991
phenylethylmalonamide	| | |	| | |	mg	mg/l	0	0	0	1	09-03-1991
phenytoin	| |*|*|	|*|*|	mg	mg/l	20	10	15	1	09-03-1991
pindolol	| | |	| | |	mg	µg/l	60	15	0	1	09-03-1991
piperacillin	| | |	| | |	mg	mg/l	70	1	0	1	09-03-1991
prazepam	| | |	| | |	mg	mg/l	200	50	0	1	09-03-1991
prazosin	| | |	| | |	mg	mg/l	0	0	0	1	09-03-1991
prednisolone	| | |	| | |	mg	mg/l	0	0	0	1	09-03-1991
prednisone	| | |	| | |	mg	mg/l	0	0	0	1	09-03-1991
primidone	| | |	| | |	mg	mg/l	10	5	0	1	09-04-1991
probenecid	| | |	| | |	mg	mg/l	150	50	0	1	09-03-1991
procainamide	| | |	| | |	mg	mg/l	10	4	0	1	09-04-1991
propranolol	| | |	| | |	mg	µg/l	300	50	0	1	09-03-1991
pyridostigmine	| | |	| | |	mg	µg/l	170	50	0	1	09-03-1991
pyrimethamine	| | |	| | |	mg	mg/l	0	0	0	1	09-03-1991
quinidine	| | |	| | |	mg	mg/l	5	2.5	0	1	09-03-1991
quinine	| | |	| | |	mg	mg/l	9.5	2.5	0	1	09-03-1991

ranitidine						mg	µg/l	250	150	0	1	09-03-1991
rifampicin						mg	mg/l	10	.1	0	1	09-03-1991
salicylic acid						mg	mg/l	300	200	0	1	09-04-1991
sisomicin						mg	mg/l	0	0	0	1	09-03-1991
streptomycin						mg	mg/l	0	0	0	1	09-03-1991
sulfadiazine						mg	mg/l	75	35	0	1	09-03-1991
sulfamethoxazole						mg	mg/l	75	35	0	1	09-03-1991
temazepam						mg	µg/l	850	350	0	1	09-03-1991
terbutaline						mg	mg/l	3	2.5	0	1	09-03-1991
tetracycline						mg	mg/l	10	5	0	1	09-03-1991
theophylline		*	*	*	*	mg	mg/l	18	8	13	1	05-26-1993
thiopental		*		*	*	mg	mg/l	40	20	30	2	09-03-1991
ticarcillin						mg	mg/l	200	0	0	1	09-03-1991
timolol	*				*	mg	µg/l	100	5	0	1	09-03-1991
tobramycin					*	mg	mg/l	8	2	5	1	11-28-1994
tobramycin (adult)					*	mg	mg/l	8	2	5	1	01-06-1995
tobramycin (pediatric)					*	mg	mg/l	8	2	5	1	01-06-1995
tocainide	*				*	mg	mg/l	10	4	0	1	09-03-1991
tolbutamide	*				*	mg	mg/l	200	40	0	1	09-03-1991
tolmetin	*				*	mg	mg/l	0	0	0	1	09-03-1991
triamterene	*				*	mg	µg/l	200	10	0	1	09-03-1991
trimethoprim	*				*	mg	mg/l	2.5	1.5	0	1	09-03-1991
tubocurarine		*			*	mg	µg/l	800	400	0	1	09-03-1991
valproic acid			*		*	mg	mg/l	100	50	0	1	09-03-1991
vancomycin					*	mg	mg/l	35	5	20	1	01-06-1995
vancomycin (adult)					*	mg	mg/l	60	8	25	2	01-06-1995
vancomycin (capd)					*	mg	mg/l	60	8	25	2	01-06-1995
vancomycin (dialysis)					*	mg	mg/l	60	8	25	2	01-06-1995
vancomycin (neonate)					*	mg	mg/l	35	8	20	2	01-06-1995
vecuronium		*		*	*	mg	µg/l	600	200	400	2	09-03-1991
verapamil						mg	µg/l	750	50	0	1	09-03-1991

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warfarin                    | | |*| | |     mg    mg/l     2.6      1.8      2.2      1        09-02-1991
zidovudine                  | | |*| | |     mg    mg/l     1        .2       0        1        09-03-1991
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Notes:

- Drugs without the @ prefix are listed with their generic name.
- Drugs with the @ prefix are listed with their brand name.
- Drugs with the **!** prefix are special cases used in the ‘applied pharmacokinetics’ course of the PUOZ foundation.

APPENDIX C

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Industriewg 11 8444 AS Heerenveen
The Netherlands