

# ChemHelp v. 1.4

An Automation script written in AutoHotKey to assist in reviewing blood results

by Dieter van der Westhuizen





*Jack McCauley's top  
mounted Scroll wheel  
prototype, supposedly circa  
1987.*

# Me in 2018



# Scrolling

T

Medical Validation : (Authorise By Episode)

Option

Mode

Inquire

Function

Audit

Print

Help

Result

Episode No

SA03160704

MRN

MIRN98836468

Lab

Groote Schuur Laboratory

M

36 y

18/09/1982

Mr Gamied Abdul SALIE

Citrate blood (blue top);Clotted blood;EDTA blood;Fluo...

F.N.

63626089

Alt

RN

Collection

16/07/2019

11:00

Hos

Groote Schuur Hospital wc GSH

021 404 9111

Received

16/07/2019

12:36

Wrd

Liver Clinic E57

404 3340

Registered

16/07/2019

13:54

Doc

DR SPEARMAN

ePR

tail D

Visit Test Set(s)

(C) SPARE1

(C) SPARE3

(A) CL <A entry>

(A) GLUR <A entry>

(E) AFP # <A entry>(VQ:CR)

(A) SIND <A entry>

(A) INR <A entry>

Update

Amend

Clear

Notes

Graph

>>

Authorise

Fully Authorise

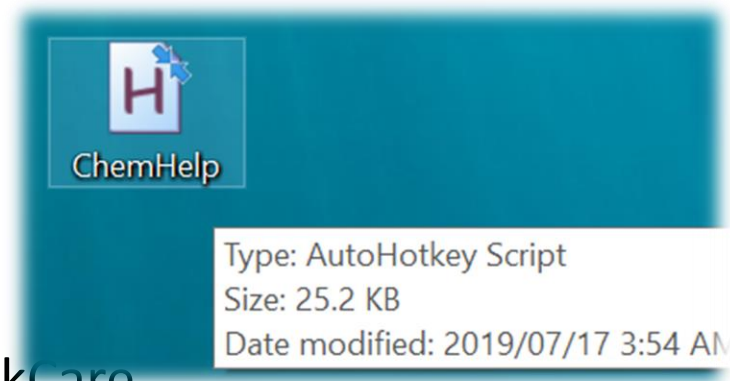
Cancel

(\* Curr.) (# In List)

Test Set	Staff Notes	Test Item	Result	Units	Normal Values	Previous Result 1	Previous Result 2	Previous Result 3	Previous Result 4	Previous Result 5
NA		Sodium	141	mmol/L	136 - 145					
K		Potassium	4.8	mmol/L	3.5 - 5.1					
CL		Chloride	102	mmol/L	98 - 107					
UREA		Urea	6.8	mmol/L	2.1 - 7.1					
CRT		Creatinine	95	umol/L	64 - 104					
		MDRD formula	>60	mL/min/1.73						
		Creatinine plus auto co	MDRD1							
GLUR		Glucose (random)	5.1	mmol/L						
		Random glucose auto	GLURC							
		Glucose clinician alert								
TP		Total protein	85	g/L	60 - 78					
ALB		Albumin	53	g/L	35 - 52					
TBIL		Total bilirubin	8	umol/L	5 - 21					
		Total bilirubin auto com								
CBIL		Conjugated bilirubin (Df	3	umol/L	0 - 3					
ALT		Alanine transaminase (A	36	U/L	10 - 40					
AST		Aspartate transaminase	22	U/L	15 - 40					
ALP		Alkaline phosphatase (A	52	U/L	53 - 128					

# What is ChemHelp?

- A script (currently ~25kb)
- Written in AutoHotKey
- Automating basic repetitive tasks in TrakCare.
- Configurable for a diverse set of functions, almost anything you can think of.
- But unfortunately limited to:
  - Mouse Clicks on certain screen / window positions.
  - Keyboard input
  - No artificial intelligence (yet).
- Inspired by Trak Helper by Chad Centner





[What is it?](#)[Documentation](#)[About the Foundation](#)[Search](#)

# AutoHotkey

Powerful. Easy to learn.

The ultimate automation scripting language for Windows.

[Download](#)[Forums](#)[Is it Safe?](#)

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**Quick Reference**

+ Usage and Syntax

Frequently Asked Questions

Tutorial (quick start)

Recent Changes

Script Showcase

Script Compatibility

Command and Function Index

+ Environment

+ External Libraries

+ File, Directory and Disk

+ Flow of Control

+ Graphical User Interfaces

+ Maths

+ Mouse and Keyboard

+ Misc.

+ Object Types

+ Process

+ Registry

+ Screen

+ Sound

+ String

+ Window

+ #Directives



# AutoHotkey

Automation. Hotkeys. Scripting.

**Version 1.1.30.03**<https://autohotkey.com>

©2003-2014 Chris Mallett, portions ©Autolt Team and the AHK community

Software License: [GNU General Public License](#)**Quick Reference**

Getting started:

- [How to use the program](#)
- [Tutorial for beginners](#)
- [Text editors with AutoHotkey support](#)
- [Frequently asked questions](#)

Scripts:

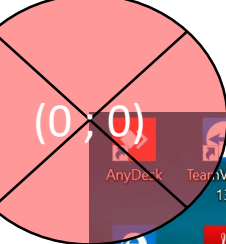
- [Concepts and conventions](#): explanations of various things you need to know.
- [Scripting language](#): how to write scripts.
- [Miscellaneous topics](#)
- [Command and function list](#)
- [Variables and expressions](#)
- [Functions](#)
- [Objects](#)
- [Interactive debugging](#)

Keyboard and mouse:

```
1 ;ChemHelp v.1.4 - updated 06-05-2019
2 ;Written by Dieter van der Westhuizen 2018
3 ;Inspired form TrakHelper by Chad Centner
4
5 #SingleInstance, force
6 #NoTrayIcon
7 #NoEnv
8 ;#Persistent
9 SetWorkingDir %A_ScriptDir% ; Ensures a consistent starting directory.
10 SetKeyDelay, 85
11 SendMode, Input
12 SetTitleMatchMode, 2
13 SetDefaultMouseSpeed, 0
14 SetMouseDelay, 0
15
16
17 ;;;;;;;;;;;;;; Add Buttons ;;;;;;;;;;;;;;
18 Gui, Add, button, w57 ,Log-on
19 Gui, Add, button, w57 , Form
20 Gui, Add, button, w57 , EPR
21 Gui, Add, button, w57 , FPSA
22 Gui, Add, button, w57 , Verified
23 Gui, Add, button, w57 , KeepOpen
24 ;Gui, Add, button, w57 , VolVeri
25 Gui, Add, button, w40, Close
26
27 ;;;;;;;;;;;;;; Set Window Options ;;;;;;;;;;;;;;
28 ;Gui, +AlwaysOnTop
29 Gui, -sysmenu +AlwaysOnTop
30 Gui, Show, , ChemHelp1.4
31 WinGetPos,,,TrayHeight,ahk_class Shell_TrayWnd,,
32 height := A_ScreenHeight-275
33 width := A_ScreenWidth-85
34 Gui, Margin, 0, 0
35 ;Gui, Add, Picture, x0 y0 w411 h485, picture.png
36 ;Gui -Caption -Border
37 Gui, Show, x%width% y%height%
38
39
40
41
42 titleoffice = Microsoft Office Activation Wizard
43 classoffice = NUIDialog
44 settimer, office_activation_watch, 150
45 return
46
47 ;;;;;;;;;;;;;;Generic script to close a pop-up window.
48 office_activation_watch:
49 IfWinExist, %titleoffice% ahk_class %classoffice%
50
```

Line: 45 | Column: 7 | INS | (CR+LF) |





AnyDesk Tear Viewer 13 Case presentati...

Microsoft Edge Acrobat Reader DC ChemHelp Presentation

Windows 7 USB DVD... SwitchNOW Citrix XenApp - Logon

Office Image Extraction ... high phosphate IP address

Ron's Editor Cesar Stata Datasets

Advanced Port Scanner Document Converters Internet Explorer

PyMOLWin StataSE-64 - Open Source Capillary Ele...

Google Chrome balenaEtcher Access Manager

This PC Win32DiskL... WindowSpy

Firefox VPN Access Manager

MalariaDJWS menu\_itaisi... Downloads 3M DJ Medquip Books ChemPath

Dieter CN... Inkscape 0.91 arduino... Google Drive

VPN Access Manager

File Edit View Help

Connect Add Modify Delete

CEC Troponin Executive S...

CEC Report on tropon...

NHLS-MT... NHLSVPN-... NHLSVPN-...

IFUK\_Aldos... IFUK\_hGH

IFUK\_C Peptide

IFUK\_Direct Renin

Window Spy

Window Title, Class and Process: Follow Mouse ☐

VPN Access Manager  
ahk\_class SHREWSOFT\_ACC  
ahk\_exe ipseca.exe  
ahk\_pid 5888

Mouse Position:

Screen: 920, 535 (less often used)  
Window: 150, 103 (default)  
Client: 138, 26 (recommended)  
Color: FFFFFFFF (Red=FF Green=FF Blue=FF)

Focused Control:

Active Window Position:

x: 770 y: 432 w: 623 h: 480  
Client: x: 0 y: 0 w: 598 h: 391

Status Bar Text:

☐ Slow TitleMatchMode

Visible Text:

All Text:

(Hold Ctrl or Shift to suspend updates)

w2j25 New Text Document

ChemHelp...

Recycle Bin

6:25 AM 2019/07/18

instrument  
[VQ-CR] instrument

instrument  
[VQ-CR] instrument

instrument  
[VQ-CR] instrument

instrument  
[VQ-CR] instrument

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[VQ-CR] instrument

instrument  
[VQ-CR] instrument

instrument  
[VQ-CR] instrument

ChemHelp1.4

Log-on

Form

EPR

FP5A

Verified

KeepOpen

Close

Select All



ENG

3:01 AM

2019/07/17



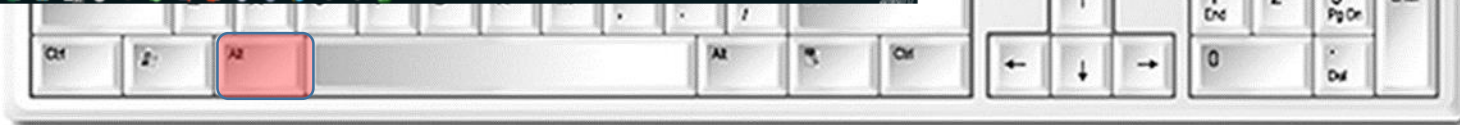
32

# ePR Patient History demonstration

23 sec vs 48 sec

Test Set	Test Item	Result	Unit	Ref Range
ALT	ALT	127	U/L	10-40
AST	AST	34	U/L	10-35
ALP	ALP	118	U/L	40-125
...	...	...	...	...
ALT	ALT	127	U/L	10-40

Test Set	Test Item	Result	Unit	Ref Range
ALT	ALT	127	U/L	10-40
AST	AST	34	U/L	10-35
ALP	ALP	118	U/L	40-125
...	...	...	...	...
ALT	ALT	127	U/L	10-40



# ePR Patient History demonstration

23 sec vs 48 sec

Episode No SA03161193 MRN 10000000000000000000  
 Ms Zimkhitha BANGO  
 F.N. 20051926 Alt RN  
 Hos Groote Schuur Hospital wc GSH 021 404 1000  
 Wrd E13 Renal Clinic 021 404 3311  
 Doc [MP0735663] Dr M.N. KAMKUEMAH

Test Set	Test Item	Result
CHOL	Total cholesterol	8.23
	Total cholesterol auto	CHOLC2
VB12	Vitamin B12	344
	Serum folate	18.8
	Machine (Serum)	CDB
	Serum folate auto com	
	Serum haemoglobin inc	0
	Serum bilirubin index	0
	Serum lipaemia index	0
	Serum haemoglobin va	16.00
	Serum bilirubin value	0.00
	Serum lipaemia value	15.00
	Urine creatinine	3.3
	Urine protein	4.87
	Urine protein : creat ra	1.476
	Urine protein auto com	UPPROC2
	Specimen received	
	Department for review	C

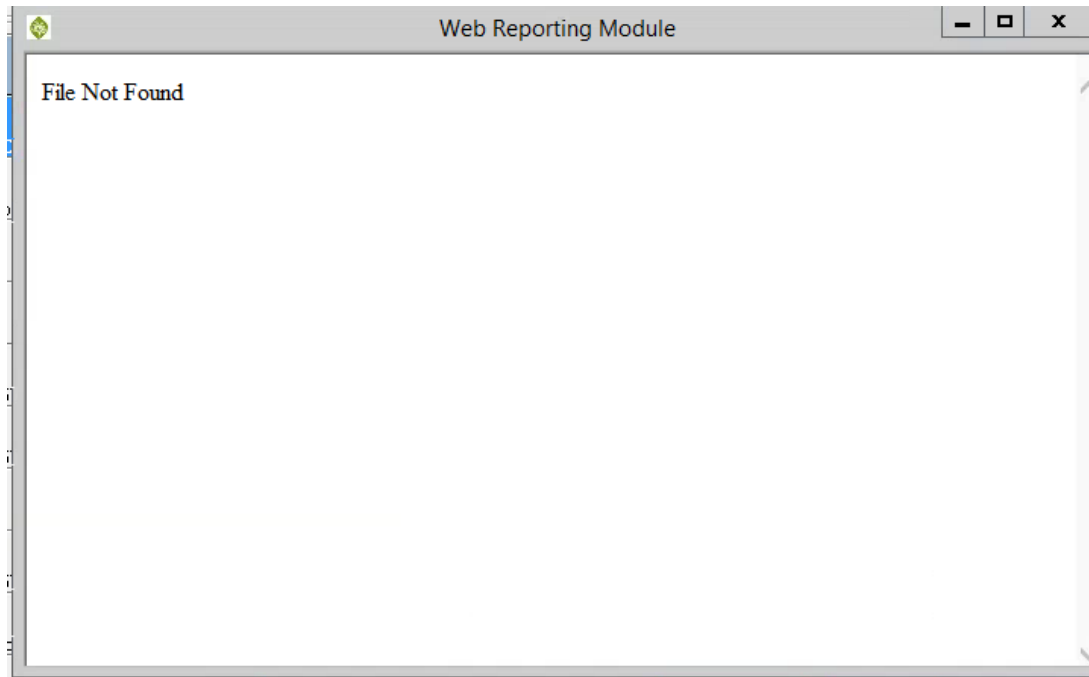
Test Set	Test Item	Result
HA	Ha	137
K	K	2.7 L
CL	CL	
BICD	Bicarb	
BICD	Anion gap	
UREA	Urea	8.4
CRT	Creat	371 H
CRT	MDRD	13
CRT	Comment	MDRD1
GLUC	Glu Random	
GLUC	Comment	
GLUC	UFT	
GLUC	Glu Fasting	6.0

Difference = 25 seconds

Registrar salary of R1.08M p.a.  
 ~215 working days/year.  
 11648 hours per year (incl. overtime)  
 11648 x 60 = 698 880 minutes  
 Cost to company ~ R 1.55 per minute.

The lost 25 sec. thus cost R0.65

# Reviewing a scanned form





# Regular problems encountered

ood;


196889	Alt	RN	Collection	16/07/2019	13:25
roote Schuur Hospital wc GSH	021 404 9111	Received	16/07/2019	14:25	
ndrology Clinic F42	404 6026 / 6027	Registered	16/07/2019	15:50	
DR] Doctor In Charge .		ePR	tail D		

(\* Curr.) (# In List)

Staff Notes	Test Item	Result	Units	Normal Values	Previous Result 1	Previous Result 2	Previous Result 3	Previous Result 4
	Prostate-specific Ag (P)	8.58	ug/L	<4.00	7.35 22/01/2019 11:25			
	Chemistry Dummy test							

Web Reporting Module

Security Alert

 Your current security settings do not allow this file to be downloaded.

OK

# Requirements for running ChemHelp

- AutoHotKey should be installed
- Internet Explorer recommended to be set as the default browser.
- When using Chrome, a plugin – Stylish – install theme “ePR for TrakCare” – to align columns correctly.