



Supplementary materials

Rapid On-Site Detection of Illicit Drugs in Smuggled Samples with a Portable Electrochemical Device †

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Connect to device
 EmStat3Blue [1] Disconnect Refresh

Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Cocaine

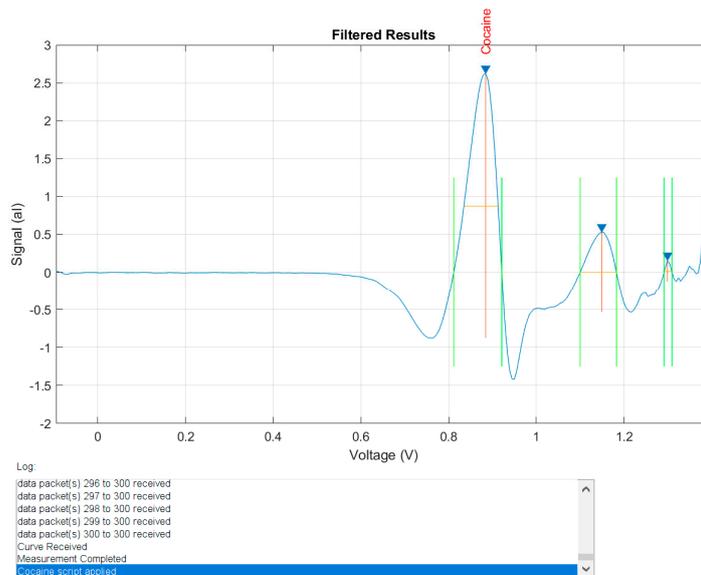



Figure S1. Example of the interface displayed in a laptop showing a positive result for cocaine along with its electrochemical profile.

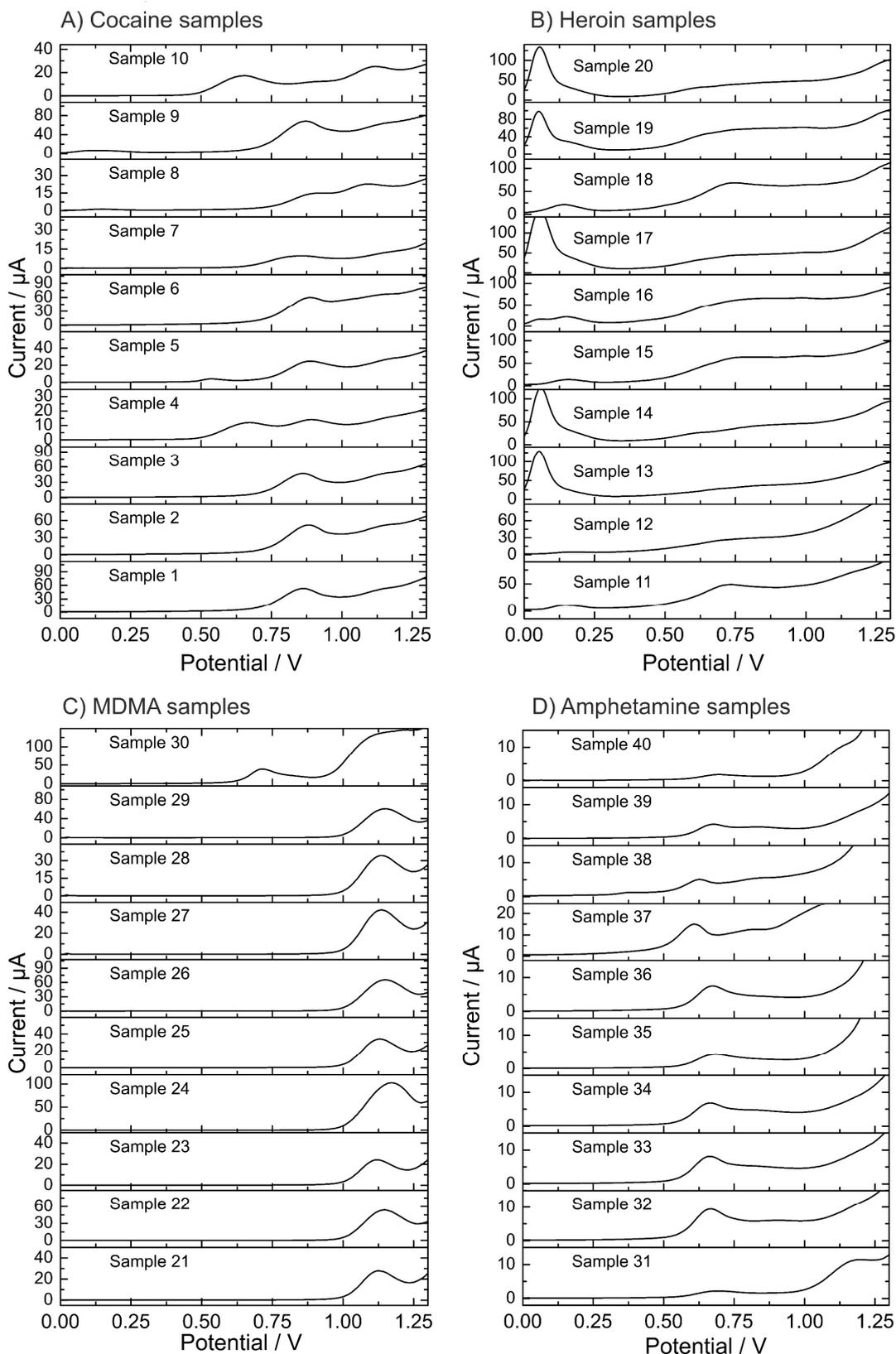


Figure S2. Square-wave voltammograms from the electrochemical analysis of the confiscated samples: A) cocaine samples, B) heroin samples, C) MDMA samples, and D) amphetamine samples.

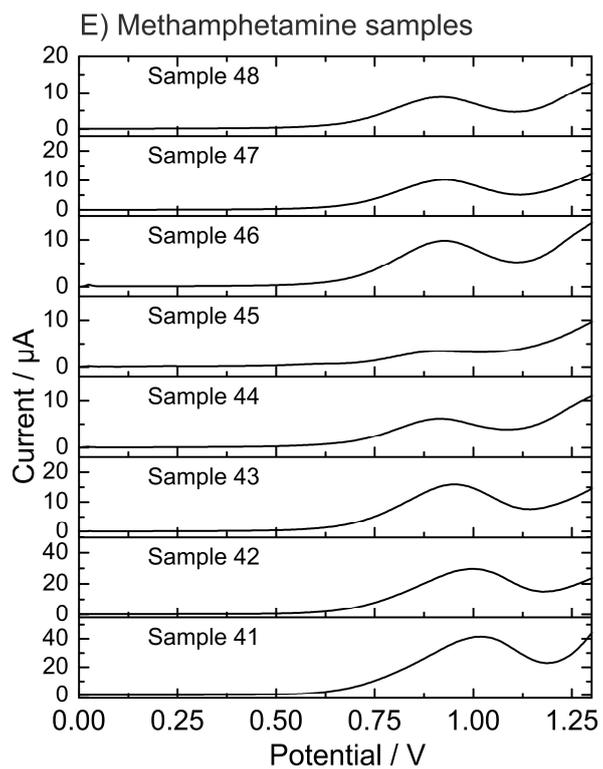


Figure S2 cont. Square-wave voltammograms from the electrochemical analysis of the confiscated samples: E) Methamphetamine samples.



Figure S3. Compilation of the screenshots from the analytical outputs obtained after the electrochemical analysis.

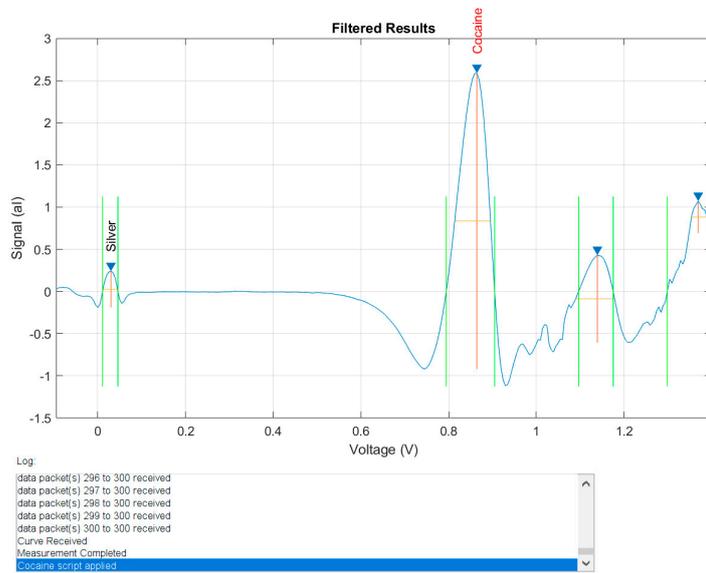
Sample 1

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Silver
Cocaine



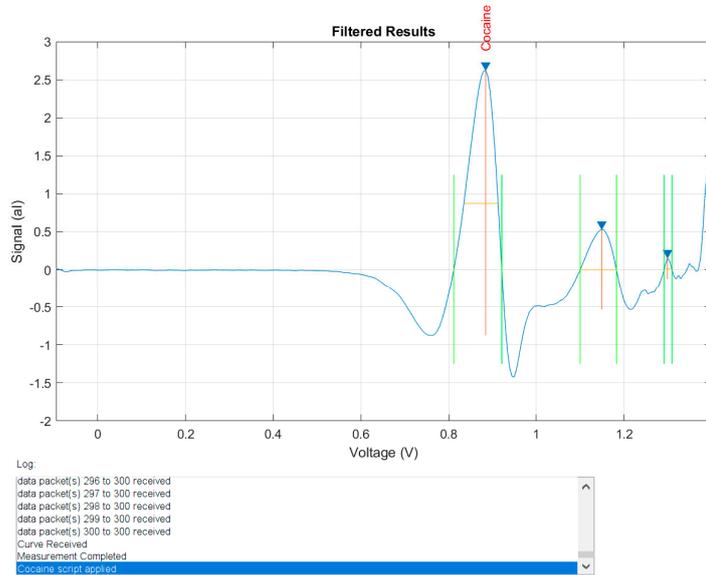
Sample 2

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine





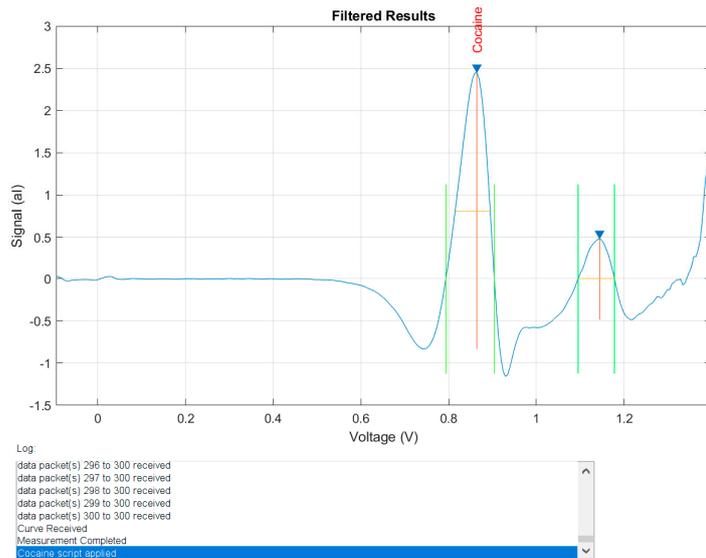
Sample 3

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine



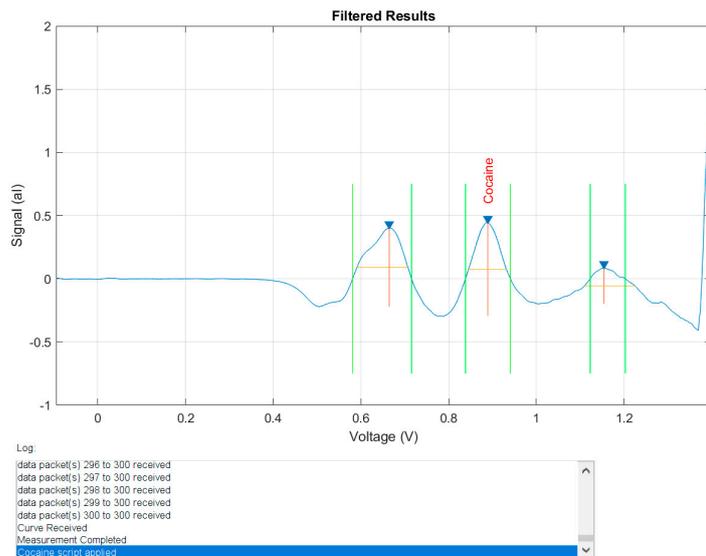
Sample 4

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine





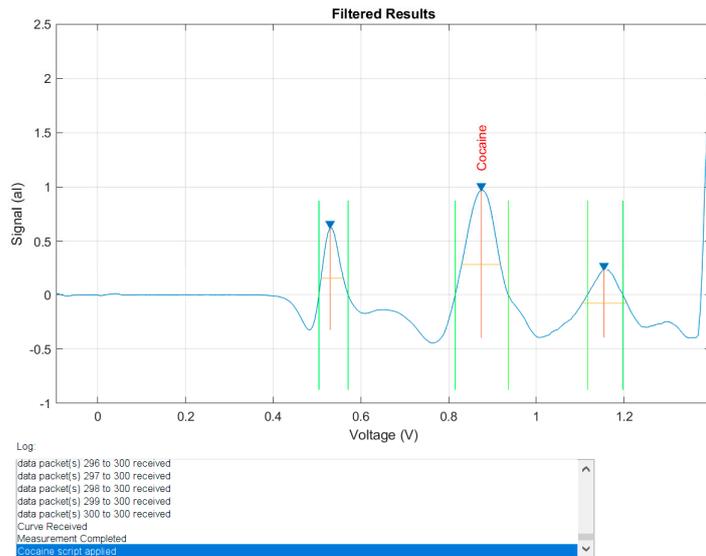
Sample 5

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine



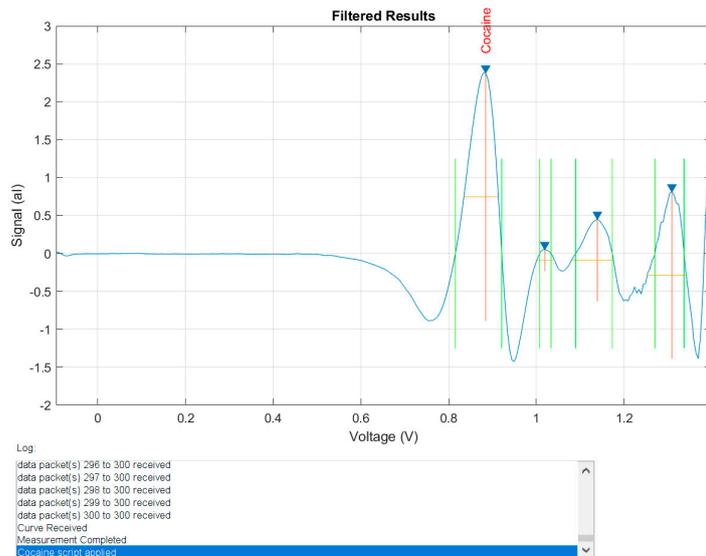
Sample 6

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine





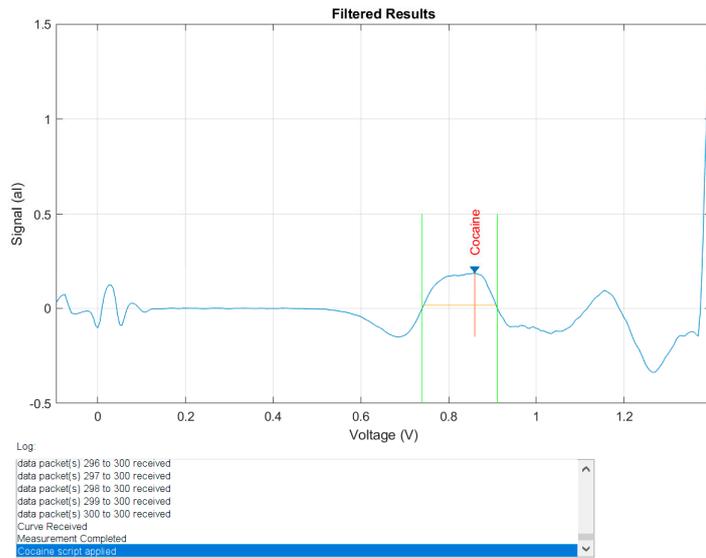
Sample 7

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine



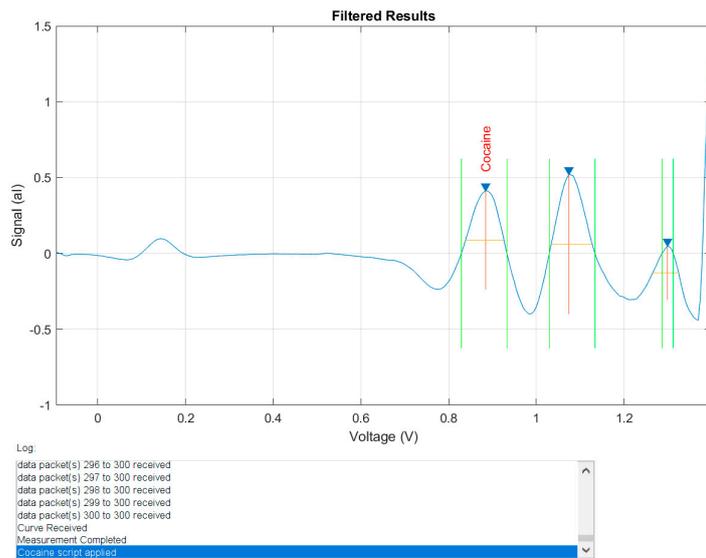
Sample 8

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine





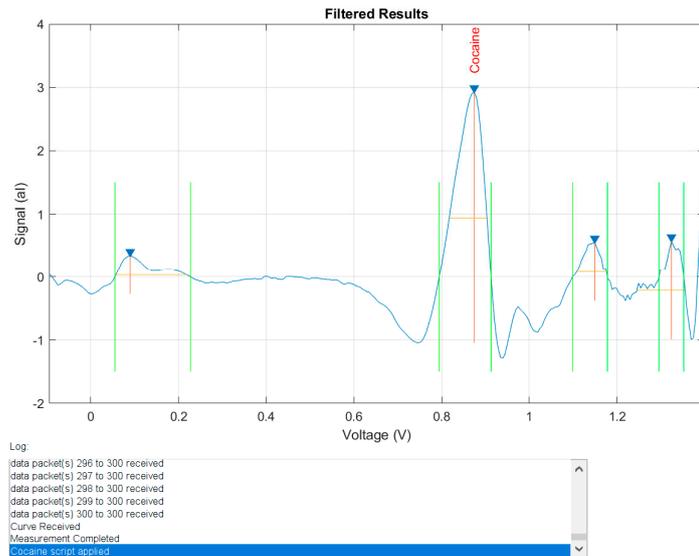
Sample 9

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine



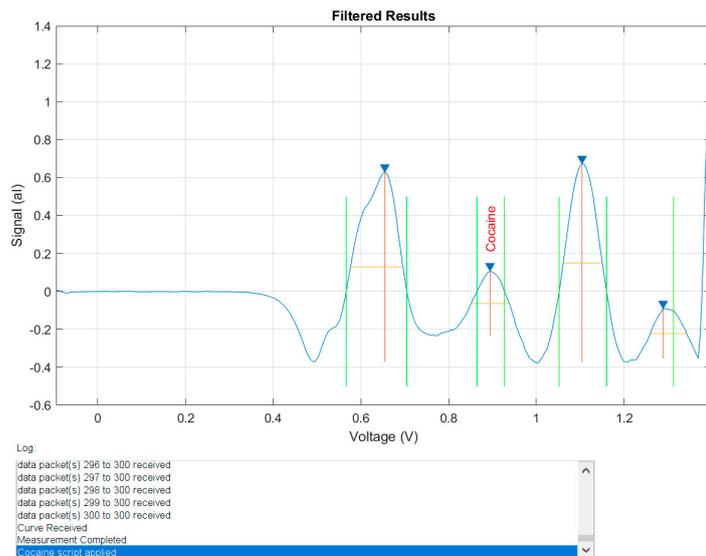
Sample 10

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Cocaine





Sample 11

Connect to device
EmStat3Blue [1] Disconnect Refresh

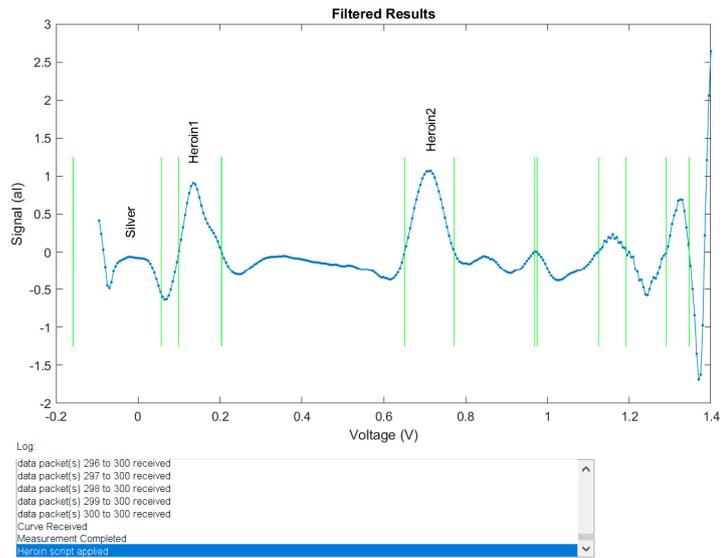
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Silver
Heroin1
Heroin2



Sample 12

Connect to device
EmStat3Blue [1] Disconnect Refresh

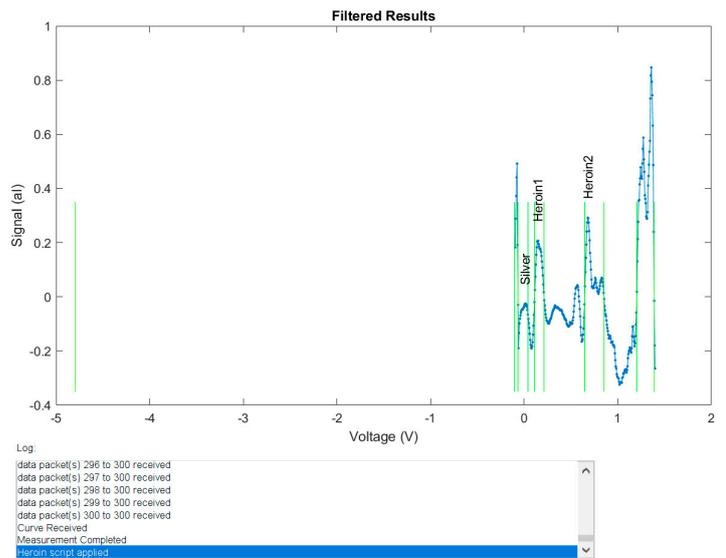
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Silver
Heroin1
Heroin2





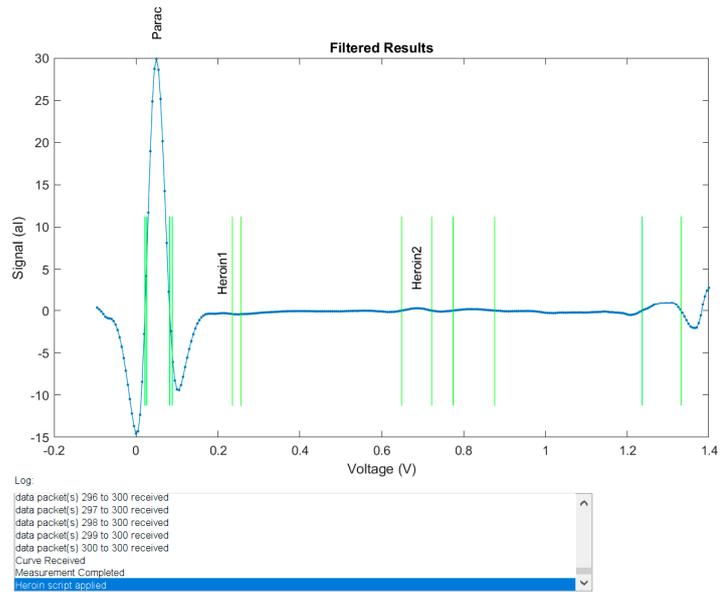
Sample 13

Connect to device
EmStat3Blue [1] [Disconnect] [Refresh]

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

[Run measurement]

Results of Measurement
Positive to:
Paracetamol
Heroin1
Heroin2



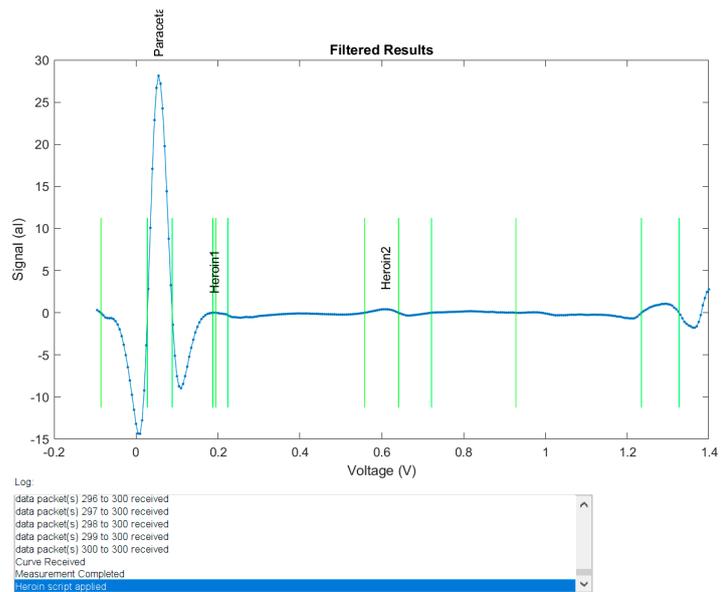
Sample 14

Connect to device
EmStat3Blue [1] [Disconnect] [Refresh]

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

[Run measurement]

Results of Measurement
Positive to:
Paracetamol
Heroin1
Heroin2





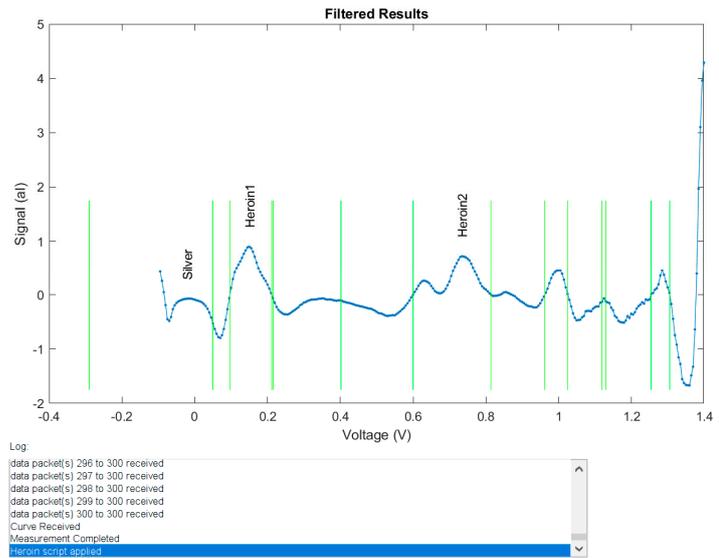
Sample 15

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Silver
Heroin1
Heroin2



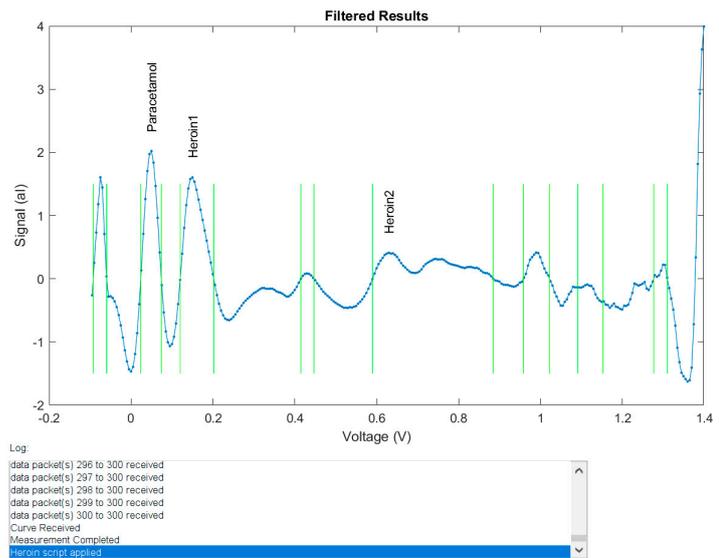
Sample 16

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
Paracetamol
Heroin1
Heroin2





Sample 17

Connect to device
EmStat3Blue [1] [Disconnect] [Refresh]

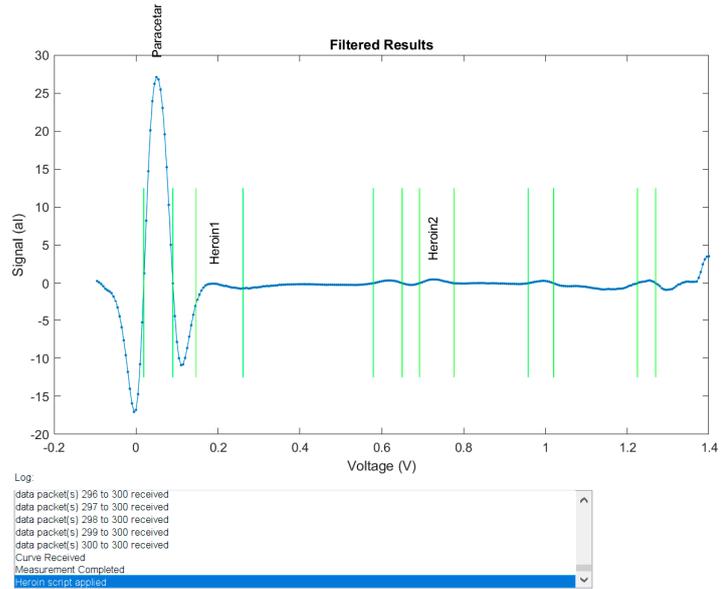
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

[Run measurement]

Results of Measurement

Positive to:
Paracetamol
Heroin1
Heroin2



Sample 18

Connect to device
EmStat3Blue [1] [Disconnect] [Refresh]

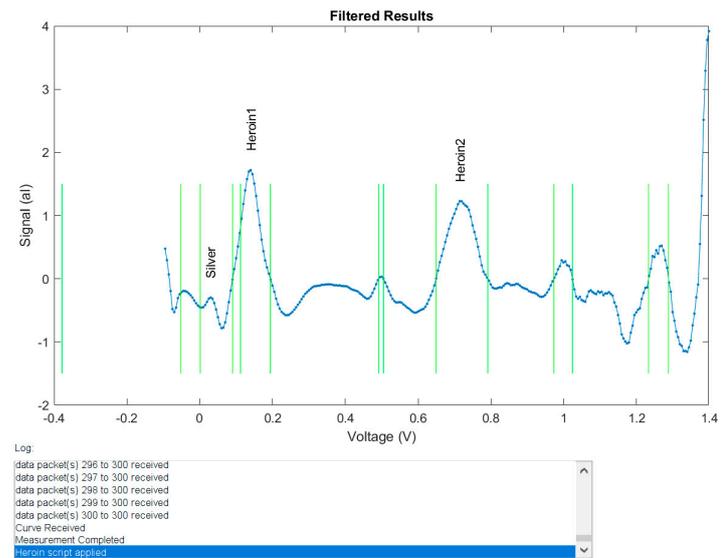
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

[Run measurement]

Results of Measurement

Positive to:
Silver
Heroin1
Heroin2





Sample 19

Connect to device
EmStat3Blue [1] [Disconnect] [Refresh]

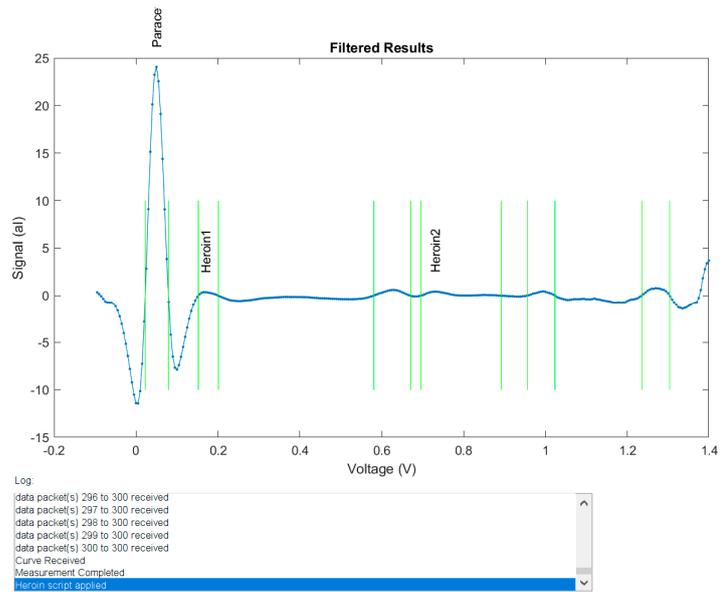
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

[Run measurement]

Results of Measurement

Positive to:
Paracetamol
Heroin1
Heroin2



Sample 20

Connect to device
EmStat3Blue [1] [Disconnect] [Refresh]

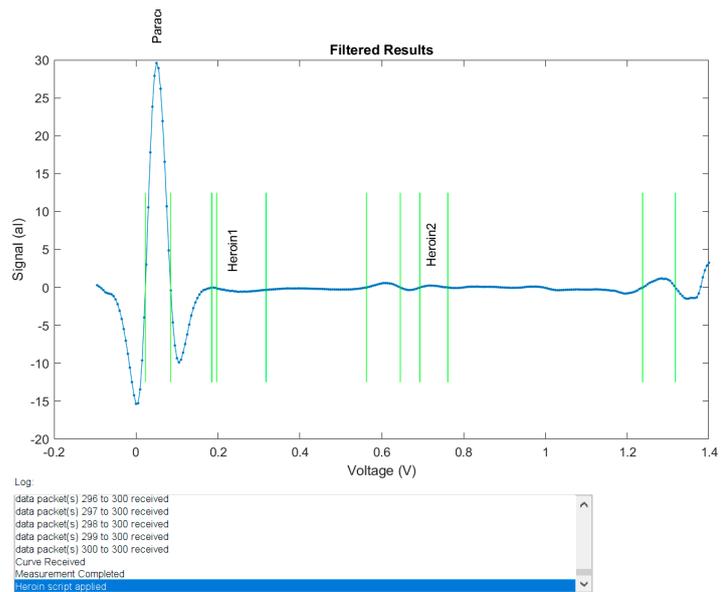
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

[Run measurement]

Results of Measurement

Positive to:
Paracetamol
Heroin1
Heroin2





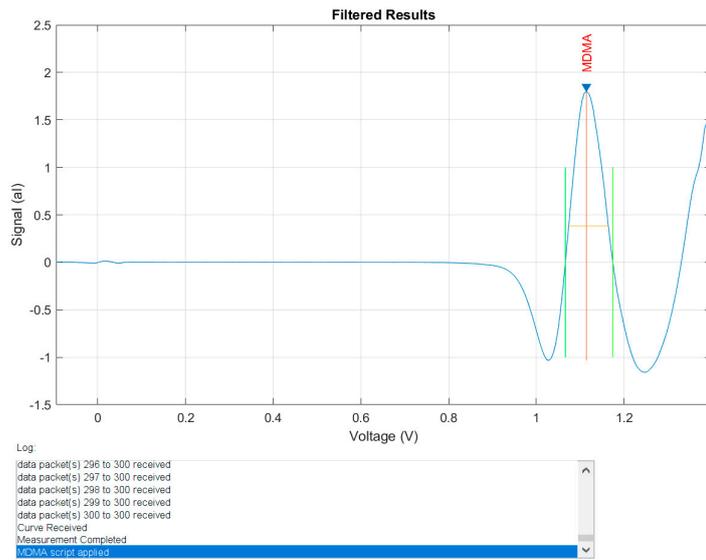
Sample 21

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
MDMA



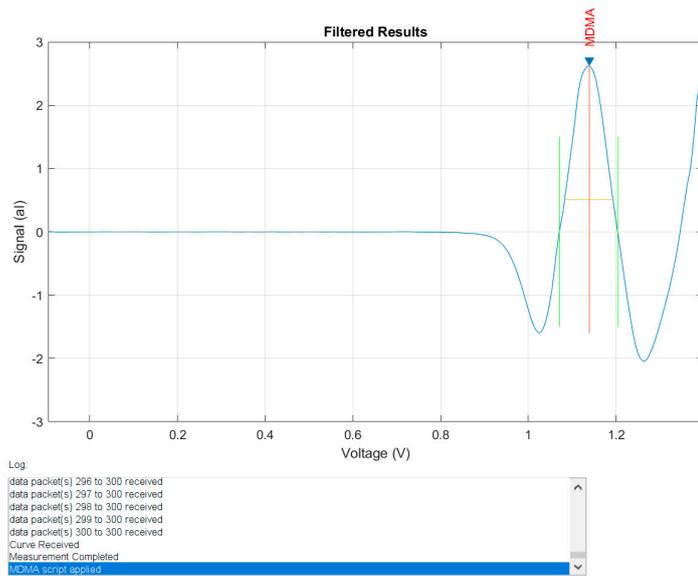
Sample 22

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
MDMA





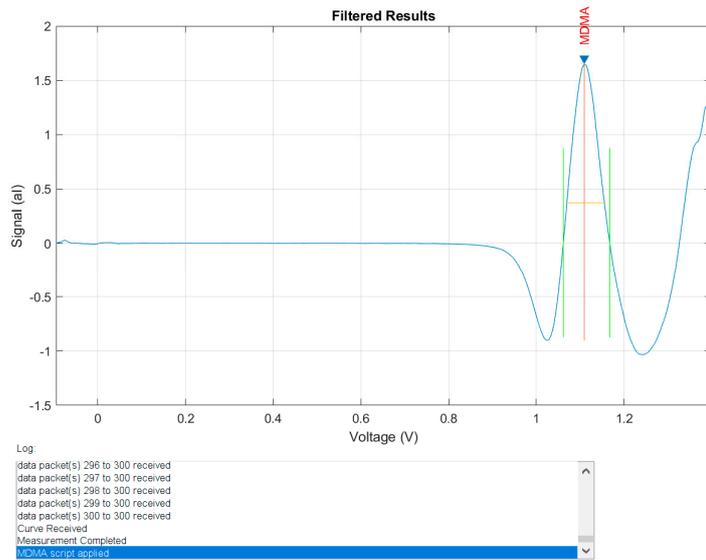
Sample 23

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:
MDMA



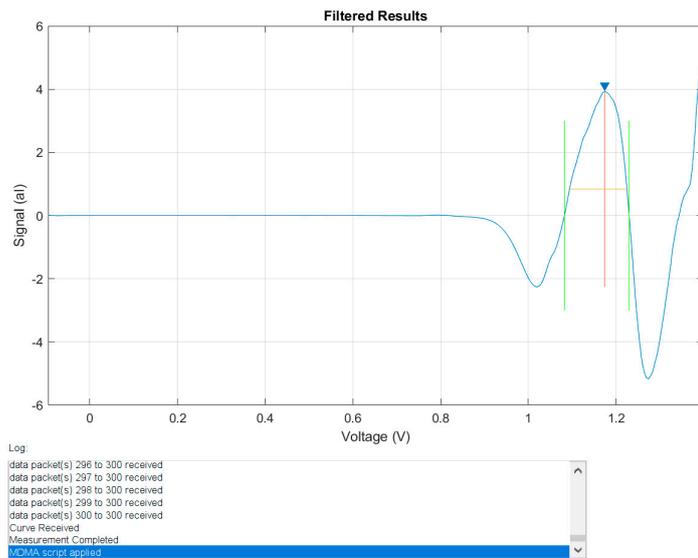
Sample 24

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement
 Cocaine measurement I
 Cocaine measurement II
 MDMA measurement
 MDMA/2-CB measurement
 Heroin measurement
 Ketamine measurement
 Amphetamine measurement
 Methamphetamine measurement

Run measurement

Results of Measurement
Positive to:





Sample 25

Connect to device
EmStat3Blue [1] Disconnect Refresh

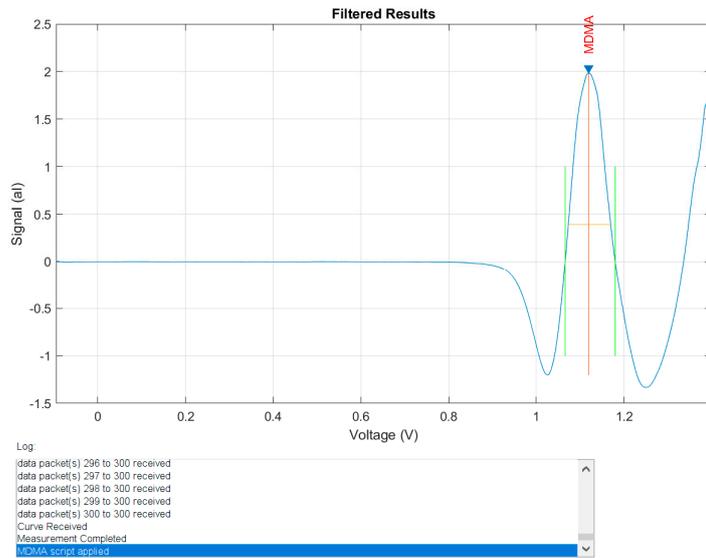
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
MDMA



Sample 26

Connect to device
EmStat3Blue [1] Disconnect Refresh

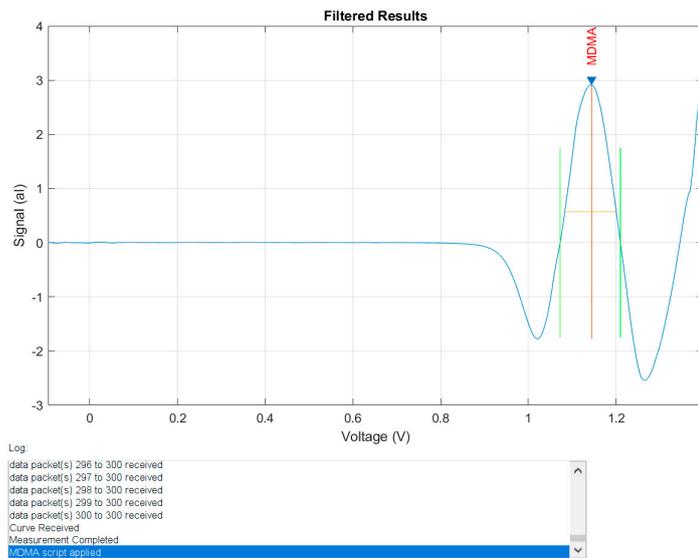
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
MDMA





Sample 27

Connect to device
EmStat3Blue [1] [Disconnect] [Refresh]

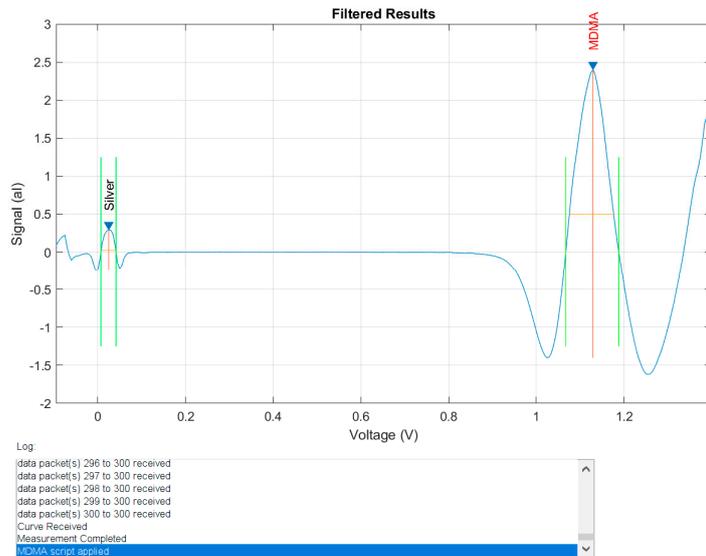
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

[Run measurement]

Results of Measurement

Positive to:
Silver
MDMA



Sample 28

Connect to device
EmStat3Blue [1] [Disconnect] [Refresh]

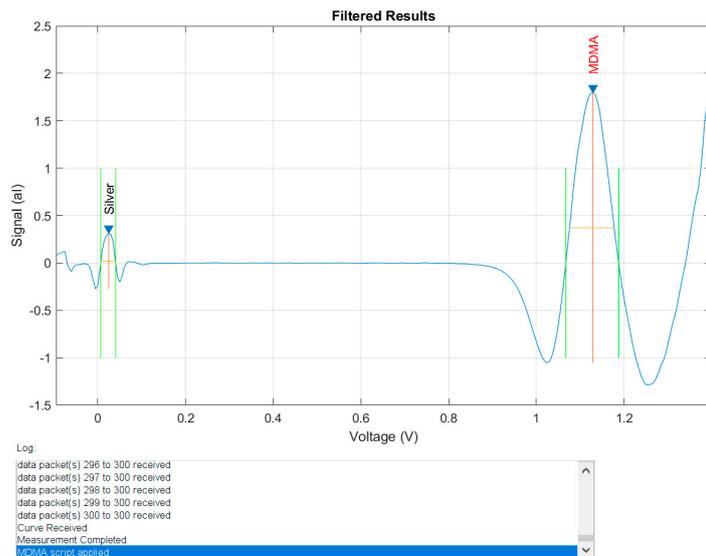
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

[Run measurement]

Results of Measurement

Positive to:
Silver
MDMA





Sample 29

Connect to device
EmStat3Blue [1] Disconnect Refresh

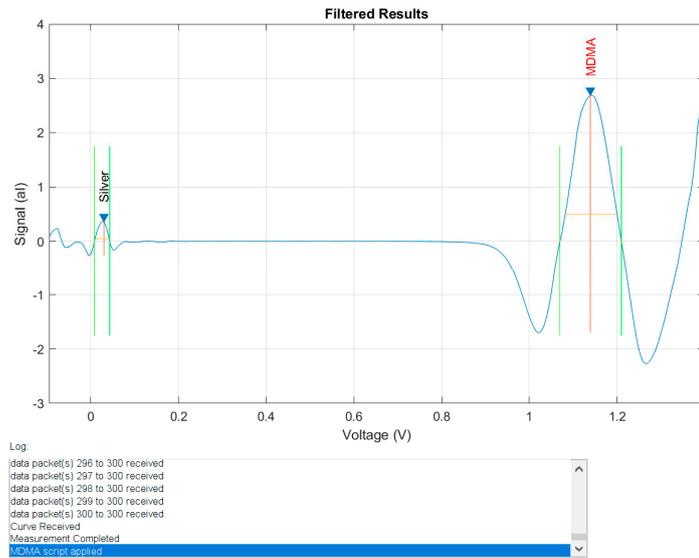
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Silver
MDMA



Sample 30

Connect to device
EmStat3Blue [1] Disconnect Refresh

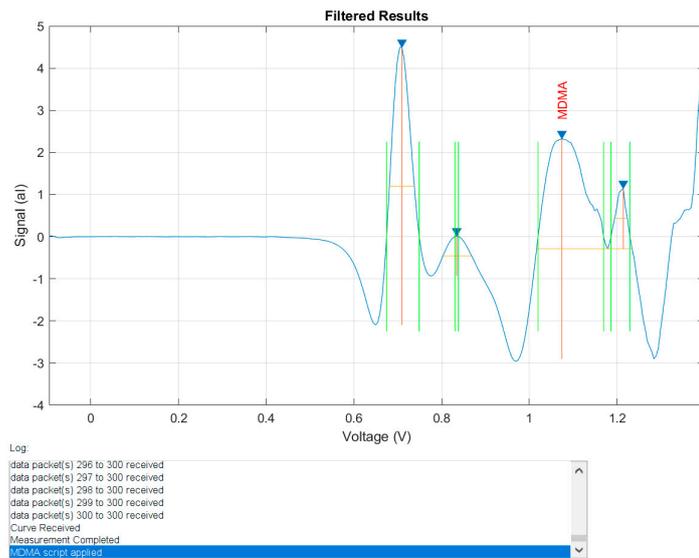
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
MDMA





Sample 31

Connect to device
EmStat3Blue [1] Disconnect Refresh

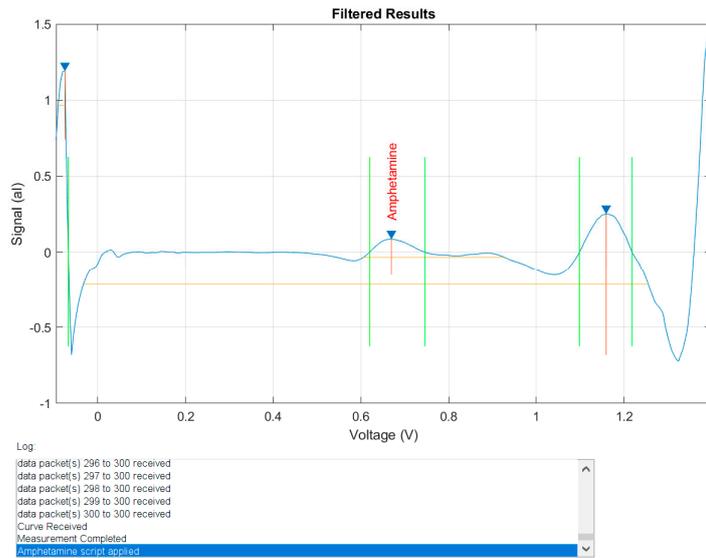
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Amphetamine



Sample 32

Connect to device
EmStat3Blue [1] Disconnect Refresh

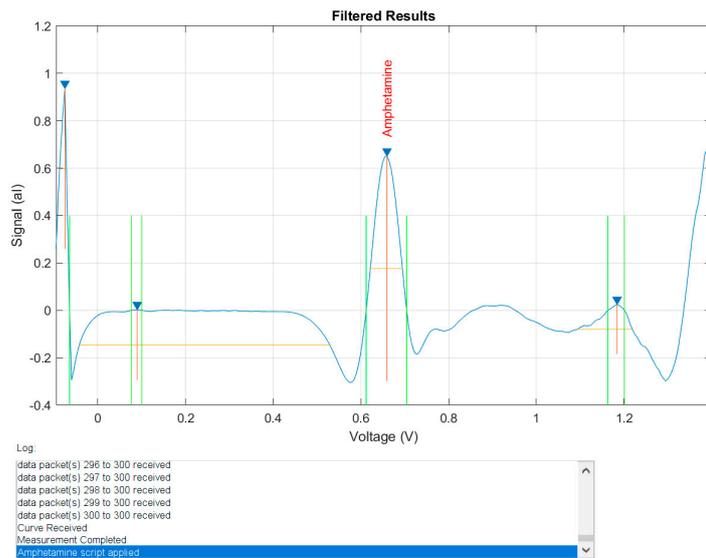
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Amphetamine





Sample 33

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement

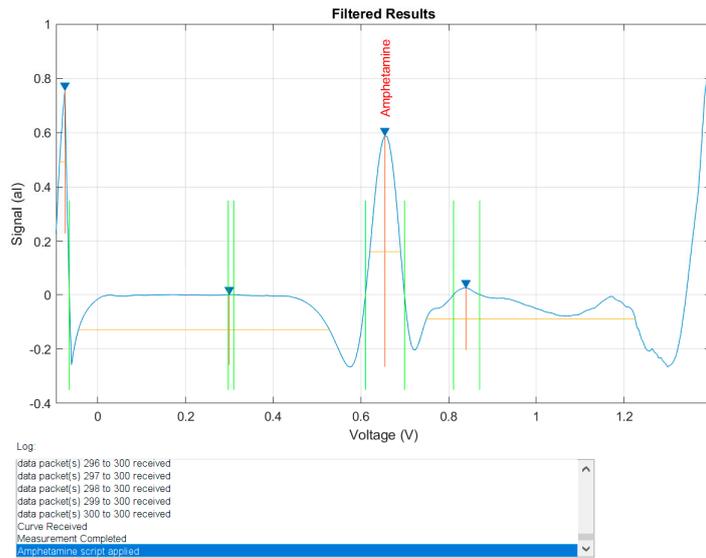
- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:

Amphetamine



Sample 34

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement

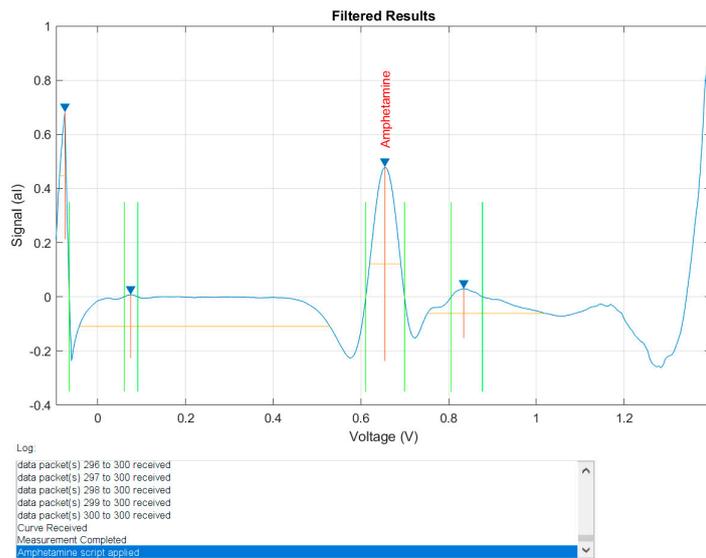
- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:

Amphetamine





Sample 35

Connect to device
EmStat3Blue [1] Disconnect Refresh

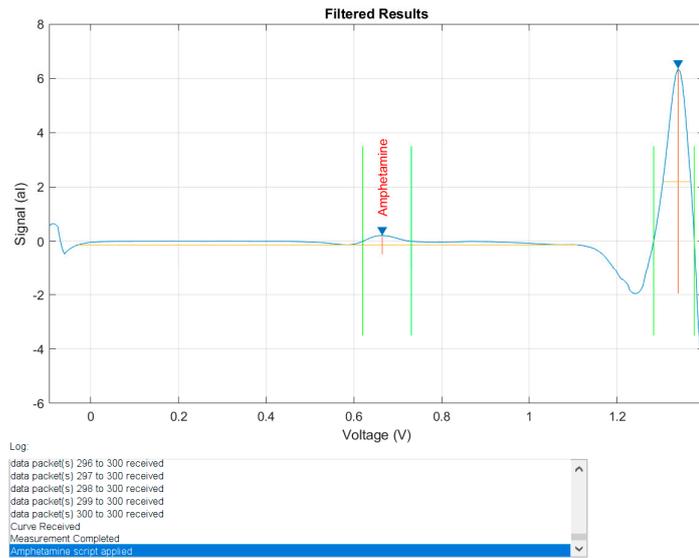
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Amphetamine



Sample 36

Connect to device
EmStat3Blue [1] Disconnect Refresh

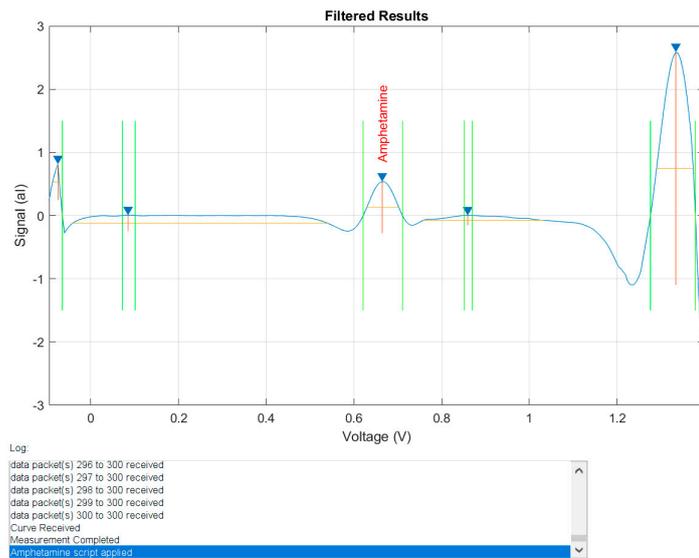
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Amphetamine





Sample 37

Connect to device
EmStat3Blue [1] Disconnect Refresh

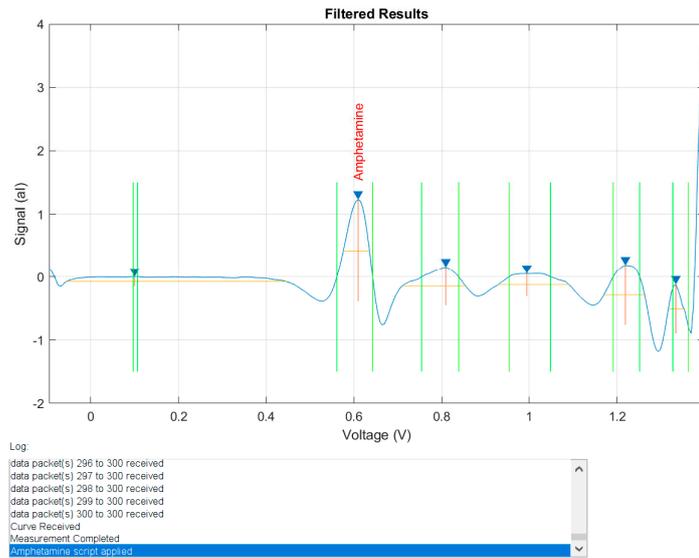
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Amphetamine



Sample 38

Connect to device
EmStat3Blue [1] Disconnect Refresh

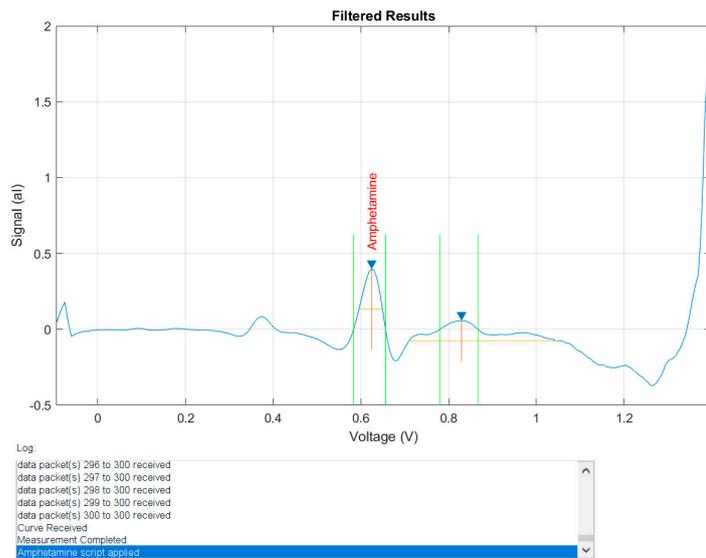
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Amphetamine





Sample 39

Connect to device
EmStat3Blue [1] Disconnect Refresh

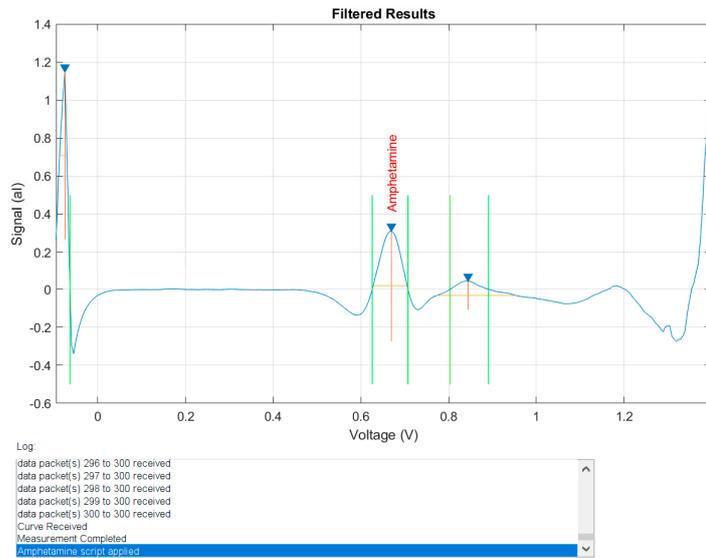
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Amphetamine



Sample 40

Connect to device
EmStat3Blue [1] Disconnect Refresh

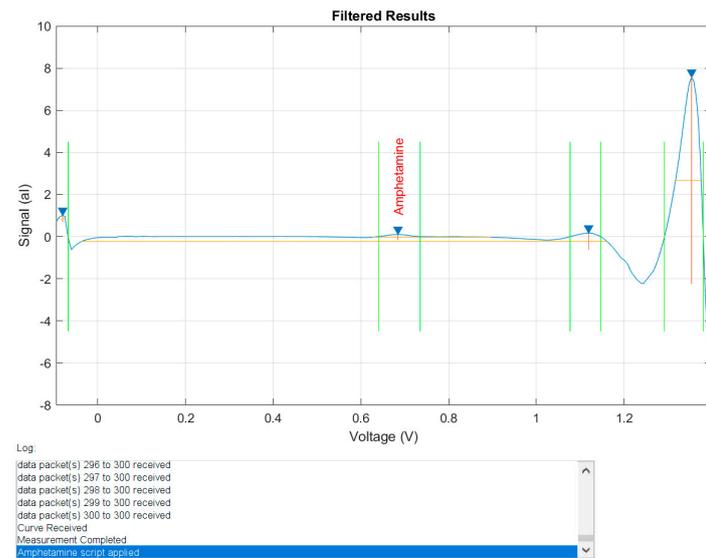
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Amphetamine





Sample 41

Connect to device
EmStat3Blue [1] Disconnect Refresh

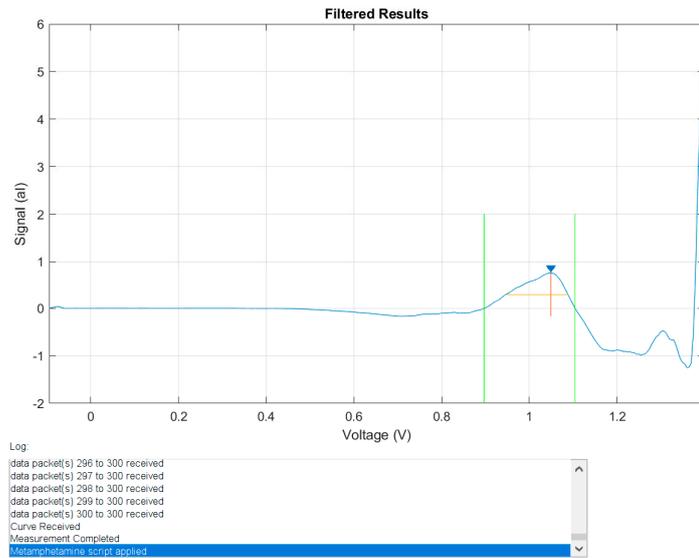
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:



Sample 42

Connect to device
EmStat3Blue [1] Disconnect Refresh

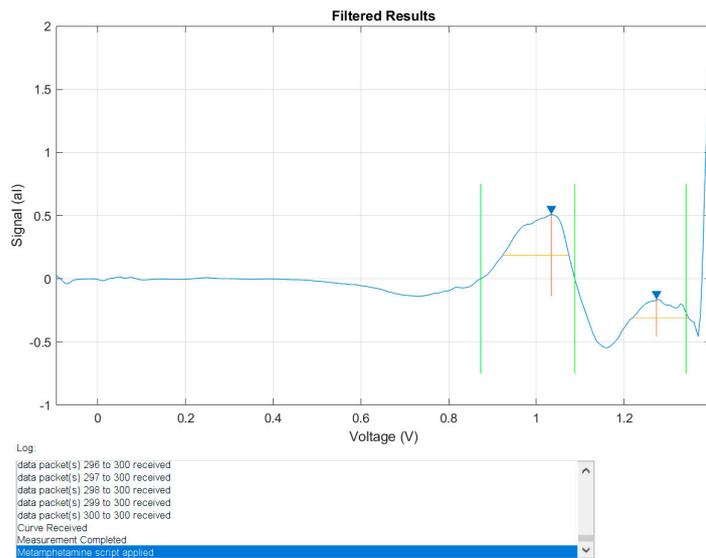
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:





Sample 43

Connect to device
EmStat3Blue [1] Disconnect Refresh

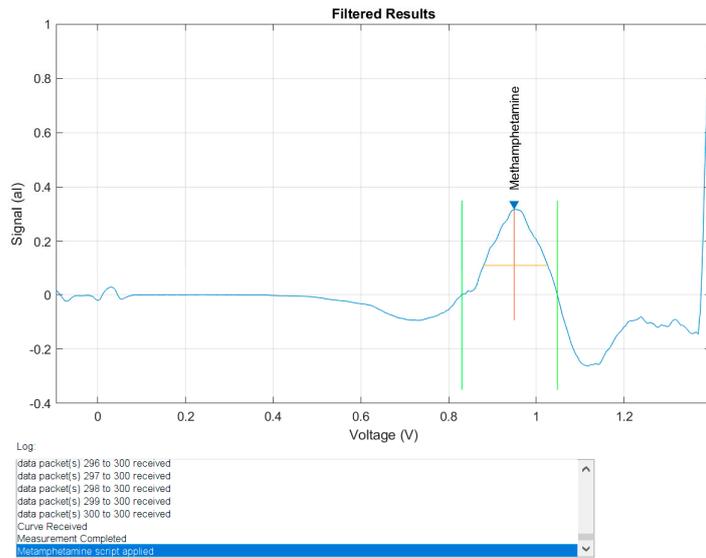
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Methamphetamine



Sample 44

Connect to device
EmStat3Blue [1] Disconnect Refresh

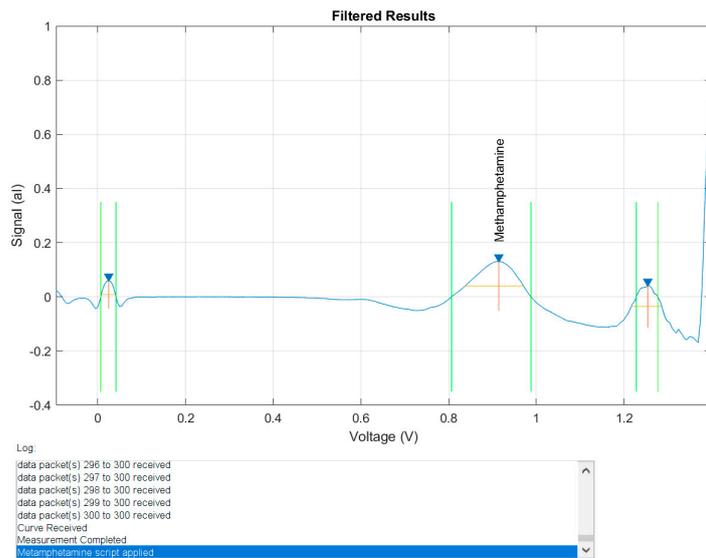
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Methamphetamine





Sample 45

Connect to device
EmStat3Blue [1] Disconnect Refresh

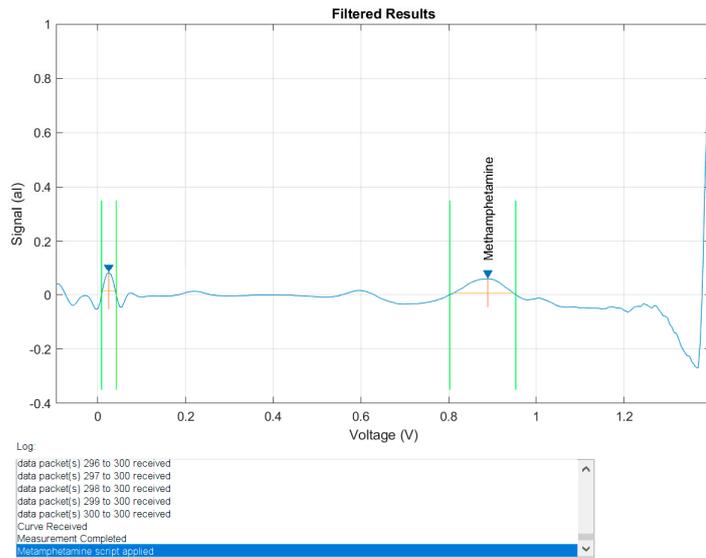
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Methamphetamine



Sample 46

Connect to device
EmStat3Blue [1] Disconnect Refresh

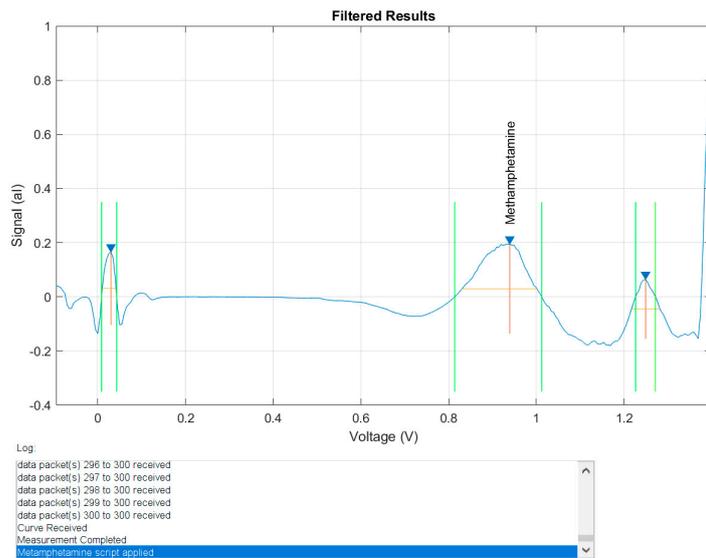
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Methamphetamine





Sample 47

Connect to device
EmStat3Blue [1] Disconnect Refresh

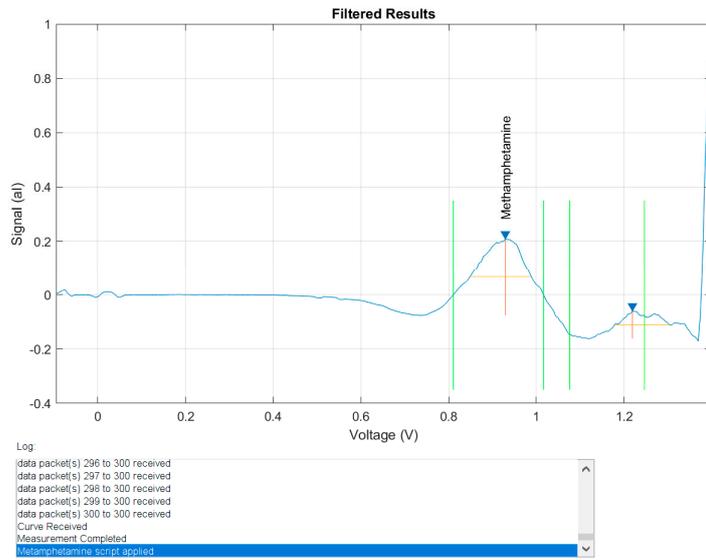
Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Methamphetamine



Sample 48

Connect to device
EmStat3Blue [1] Disconnect Refresh

Measurement

- Cocaine measurement I
- Cocaine measurement II
- MDMA measurement
- MDMA/2-CB measurement
- Heroin measurement
- Ketamine measurement
- Amphetamine measurement
- Methamphetamine measurement

Run measurement

Results of Measurement

Positive to:
Methamphetamine

