

Sensors Pricelist

Contents

KITS	2
ItalSens sensors	
BVT Sensors	7
BST Sensors	12
CHI electrodes and cells	13
Gwent Group Ltd	14
MicruX	15
Rusens	17
PalmSens sensor accessories	18



KITS





Electrochemistry Kit

In this kit you will find neatly arranged all the equipment (except chemicals) you need at your electrochemical workstation. The handy combination of BVT accessories and an EmStat3 Blue or PalmSens3ElS potentiostat will make it easy for you to start immediately with your research. The kit is available with a classic metal disc working electrode or thick film electrodes.

In the kit with classic electrodes (EKC) you will find:

- PalmSens3 [EKC-PS3EIS] or PalmSens4 [EKC-PS4.F2.10] or EmStat Blue [EKC-ES3BLUE]
- TC4 cell (a glass cell with 5 openings)
- 3 stoppers (for the glass cell)
- stirrer ST1 designed for TC4
- BVT classic WE (choose between BVT-WCE(S or 1)D(1-4).ES)
- BVT classic RE
- BVT classic CE
- Rugged plastic case

In the kit with Screen Printed Electrodes (EKS) you will find:

- PalmSens4 [EKS-PS4.F2.10] or PalmSens3EIS [EKS-PS3EIS] or EmStat Blue [EKS-ES3BLUE]
- TC4 cell (a glass cell with 5 openings)
- 3 stoppers (for the glass cell)
- stirrer ST1 designed for TC4
- BVT Sensor connector (conical plug for the glass cell with integrated connector)
- BVT Starter Kit (various BVT electrodes, more information)
- Rugged plastic case

Order code: EKC-PS4.F2.10 EKS-PS4.F2.10 EKC-PS3-EIS EKS-PS3-EIS	Price: 5.175 4.895 4.675 4.395	Ask PalmSens BV for multiple order discount
EKC-ES3-BLUE	2.775	
EKS-ES3-BLUE	2.495	





Educational Kit

This Kit is designed as the foundation for an electrochemistry course, lab class or similar teaching events. We combined our potentiostat with the necessary equipment and electrodes for a series of educational electrochemical experiments. To make sure that the instructor and students have the essential theoretical background for the experiments, we deliver a detailed teaching guide with the kit.

Experiments:

- Copper and Nickel Deposition
- The Cottrell Experiment
- Cyclic Voltammetry
- Detection of Multiple Heavy Metals by Stripping Voltammetry
- Glucose Biosensor
- Prussian Blue Hydrogen Peroxide Sensor

The kit includes:

- PalmSens potentiostat (EmStat series or PalmSens series)
- Retort stand with clamp
- Beaker
- Sensor connector
- Magnetic stirrer
- Switchbox (not included for EDUKIT ES3 and EDUKIT ES3+)
- 20x BVT Gold Sensors [BVT-AC1.W1.R1]
- 20x IS-C sensors
- 20x IS-HM sensors
- Pt disc working electrode
- Reference electrode (Ag/AgCl)
- Pt wire counter electrode
- Polishing tools
- Teacher's guide (a copy in paper and a pdf)
- Student's instructions (a copy and a pdf)

Order code:	Price:	Included potentiostat	Ask PalmSens BV for
EDUKIT-ES3-USB	2.525	EmStat3	multiple order
EDUKIT-ES3P-USB	2.925	EmStat3+	discount
EDUKIT-ES3-BLUE	3.000	EmStat3 Blue	
EDUKIT-ES3P-BLUE	3.405	EmStat3+ Blue	
EDUKIT-PS3	4.400	PalmSens3	
EDUKIT-PS3-EIS	4.900	PalmSens3EIS	
EDUKIT-PS4.F#.##	On inquiry	PalmSens4	





ItalSens SPE KIT

The ItalSens SPE KIT is meant to be combined with one of our potentiostats. Together they form a small and low cost electrochemical workstation. A simple retort stand with clamp, a magnetic stirrer (IS-SPEKIT2 also includes a switchbox for software controlled stirrer control) and a beaker are enough to perform various electrochemical experiments. The included ItalSens electrodes are suitable for many point-of-care applications and very popular. The electrodes offer a carbon and gold working electrode as well as an electrode modified for heavy metal detection. The complementary application notes booklet contains an application note for each of the electrodes.

Content IS-SPEKIT1:

- 20x ItalSens Graphite Sensors
- 20x BVT Gold Sensors [BVT-AC1.W1.R1]
- 20x ItalSens Sensors for Heavy Metals
- 1x Sensor connector for screen printed electrodes
- 1x Stand, clamp, moffel, beaker
- 1x Application notes
- 1x Magnetic stirrer

Additional in IS-SPEKIT2

o 1x switchbox for magnetic stirrer control via software

Order code: IS-SPEKIT1 IS-SPEKIT2
Price: EUR 390 EUR 510



ItalSens sensors



Screen Printed Electrodes



Screen Printed Electrodes

IS-1: ItalSens graphite sensors

IS-HM1: ItalSens sensors for heavy metals

Order multiple for IS sensors: 20 units



ItalSens sensor cable for PalmSens

Type TRIAD Type LEMO
Order code: IS-SENS-TR IS-SENS-LM
Price: EUR 70 EUR 70

Alternative: PS-CONN, see page 18

Working Electrodes



Order Code: Description: Price: IS-2MM.AU-WE.1 Classic Metal Disc Electrode (Ø 2 mm, Au) (1 unit) **EUR 120** IS-2MM.AU-WE.3 Classic Metal Disc Electrode (Ø 2 mm, Au) (3 units) **EUR 312** IS-2MM.PT-WE.1 Classic Metal Disc Electrode (Ø 2 mm, Pt) (1 unit) **EUR 120** IS-2MM.PT-WE.3 Classic Metal Disc Electrode (Ø 2 mm, Pt) (3 units) **EUR 312** IS-2MM.AG-WE.1 Classic Metal Disc Electrode (Ø 2 mm, Ag) (1 unit) **EUR 120** IS-3MM.GC.WE.1 Classic Metal Disc Electrode (Ø 3 mm, Glassy **EUR 120** Carbon) (1 unit) IS-3MM.GC.WE.3 Classic Metal Disc Electrode (Ø 3 mm, Glassy **EUR 312** Carbon) (3 units)

Microelectrodes



Order Code:	Description:	Price:
IS-10UM.AU.WE.1	Ultramicro Metal Disc Electrode (Ø 10 µmm, Au) (1 unit)	EUR 196
IS-10UM.AU.WE.3	Ultramicro Metal Disc Electrode (Ø 10 µmm, Au) (3 units)	EUR 500
IS-25UM.AU.WE.1	Ültramićro Metal Disc Electrode (Ø 25 μmm, Au) (1 unit)	EUR 196
IS-25UM.AU.WE.3	Ültramicro Metal Disc Electrode (Ø 25 µmm, Au) (3 units)	EUR 500
IS-10UM.PT.WE.1	Ultramicro Metal Disc Electrode (Ø 10 μmm, Pt) (1 unit)	EUR 196
IS-10UM.PT.WE.3	Ultramicro Metal Disc Electrode (Ø 10 μmm, Pt) (3 units)	EUR 500
IS-25UM.PT.WE.1	Ultramicro Metal Disc Electrode (Ø 25 µmm, Pt) (1 unit)	EUR 196
IS-25UM.PT.WE.3	Ultramicro Metal Disc Electrode (Ø 25 μmm, Pt) (3 units)	EUR 500



Reference and Counter electrodes



Order Code:	Description:	Price:
IS-AG/AGCL.AQ.RE.1	Reference Electrode with Ag/AgCl in aqueous KCl (1 unit)	EUR 40
IS-AG/AGCL.AQ.RE.3	Reference Electrode with Ag/AgCl in aqueous KCl (3 units)	EUR 108
IS-AG.NA.RE.1	Reference Electrode with Ag for non-aqueous solution (1 unit)	EUR 40
IS-AG.NA.RE.3	Reference Electrode with Ag for non-aqueous solution (3 units)	EUR 108
IS-CAL.RE.1	Reference Electrode based on Calomel (1 unit)	EUR 124
IS-PT.W.CE.1	Counter Electrode made of Platinum Wire (1 unit)	EUR 108
IS-PT.W.CE.3	Counter Electrode made of Platinum Wire (3 units)	EUR 288

Other



Order Code:	Description:	Price:
IS-MRS.1	Mini-Retort Stand including 4 glass cell (IS-GC)	EUR 200



Order Code:	Description:	Price:
IS-SCS.1	Simple Cell Set combination of IS-GC.1, IS-TL.1 and IS-SCF.1	EUR 68



Order Code:	Description:	Price:
IS-SCF.1	Simple Cell Foot	EUR 30
IS-GC.1	4 Glass Cells (25 mL) with ground joint lit	EUR 8
IS-TL.1	Lit for the glass cell made from Teflon	EUR 30

Order Code:	Description:	Price:
IS-EPS.1	Electrode Polishing Set, includes cloth, glass plates	EUR 120
	and alumina powder for electrode polishing (1 unit)	

Handling fee for ItalSens sensors: EUR 30 Handling fee for ItalSens electrodes EUR 50



BVT Sensors





BVT-AC1 sensors:

Order code: BVT-AC1.W#.R# Order multiple of AC1 sensors: 20

	WS.	RS
	Au/Pt	AgPd (98%/2%)
	W1.	R1
	Au	Ag/AgCl (60%/40%)
BVT-AC1.	W2.	R2
BVI-ACI.	Pt	Chlorinated silver**
	W3.	
	Ag	
	W4.	
	C*	

Dw = 2 have the same price as the regular AC1.W#.R#.

Order code: BVT-AC1.W#.R#

Price: 1,35 each for 260 or more 1,50 each for 20 to 240

* Add EUR 0,40 to the price of each W4 sensor ** Add EUR 0,70 to the price of each R2 sensor

BVT-AC1.AChE sensors¹:

EUR 9,90 each for 25 to 250

BVT-AC1.GOD sensors¹:

EUR 7,90 each for 25 to 250



AC1 sensorcable for PalmSens

Type TRIAD Type LEMO
Order code: BVT-SENS-TR BVT-SENS-LM
Price: EUR 70 EUR 70

Alternative : PS-CONN, see page 18



FC2.3 Flow cell (PMMA) for AC1 sensors FC4.3 Flow cell (PEEK) for AC1 sensors

Both with cable for PalmSens Specify connector (Lemo or Triad), ask PalmSens BV

Order code: BVT-FC2.3 BVT-FC4.3 Price: EUR 180 EUR 290

¹ These sensors have to be shipped in a cooled box, with extra shipment charges depending on destination. Order multiple of BVT-AC1.AChE sensors and BVT-AC1.GOD sensors: 25



7



Glass cells

TC4: Standard small volume 20 ml cell with central opening (NJ 12/14) and four side openings (NJ 10/13).

TC5: Water jacketed 20 ml cell with central opening (NJ 12/14) and four side openings (NJ 10/13).

TC6: Special easily washable 20 ml cell with central opening (NJ 12/14) and four side openings (NJ 10/13).

Order code:	BVT-TC4	BVT-TC5	BVT-TC6
Price:	EUR 120	EUR 120	EUR 180
Stopper:	EUR 1,50	EUR 1,50	EUR 1,50
Stopper for tubing:	EUR 5,00	EUR 5,00	EUR 5,00



KA1C.3 Cable for AC1 sensors used with TC4 cell

Order code: BVT-KA1C.3 Price: EUR 90



Sensorarray

Order code: BVT-AC9C.Wn.Rm Order multiple of AC9C sensors: 5

	WS.	RS
	Au/Pt	AgPd (98%/2%)
	W1.	R1
	Au	Ag/AgCl (60%/40%)
BVT-AC9C.	W2.	R2
BV1-AC9C.	Pt	Chlorinated silver**
	W3.	
	Ag	
	W4.	
	C*	

Order code: BVT-AC9C.Wn.Rm

Price: EUR 8,90 each for 5 to 250 EUR 8,10 each for 255 or more

* Add EUR 0,40 to the price of each W4 sensor ** Add EUR 0,70 to the price of each R2 sensor

Order code: AC9C Sensorarray cable for MUX8/16 multiplexer

Price: BVT-ARRMUX

EUR 140,00



BVT classic electrodes



Working Classic Electrode Conic

WCEc. WS.D1: Platinum wire, Φ 100 μ m WS.D2: Platinum wire, Φ 600 μ m WS.D3: Platinum wire, Φ 1000 μ m W1.D4: Golden wire, Φ 20 μ m

Order code: BVT- WCEc.Wn.Dn.ES

Price: 120 Order multiple: 1 unit



Reference Classic Electrode Conic

RCEc. R1 – Ag covered by AgCl

RS - Ag

Order code: BVT- RCEc.Rn.ES

Price: 140
Order multiple: 1 unit



Auxiliary classic electrode conic

ACEc is a glass tube with platinum plate wire.

Order code: BVT- ACEc.ES

Price: 135 Order multiple: 1 unit



Miniature Oxygen Electrode

OE. D1: Platinum wire, Φ 100 μm

D2: Platinum wire, Φ 600 μ m D3: Platinum wire, Φ 1000 μ m D4: Golden wire, Φ 20 μ m

Order code: BVT- 0E.Dn.ES

Price: 250 Order multiple: 1 unit





Calomel electrode

The reference system is Hg/HgCl₂ contacted by a platinum wire. The electrode can be delivered with a salt bridge.

Order code: BVT- CALEL Price: 140
Order multiple: 1 unit

BVT accessories



Mini rotating disk electrode

- with an USB connection
- openings are suitable for the connector KA1C.S Set consists of:
- the mini Rotating disc electrode
- a TC4 glass cell
- control electronics and software

Order code: BVT- MRDE Price: 3.200



Minithermostat

Fast sample cooling/heating (from -9,9°C to 59,9°C with accuracy 0,1°C). For use with TC4, TC6.





Stirrer ST1

- brushed motor
- control via the PalmSens or EmStat Blue possible
- supply voltage 3 V and current max 100 mA
- Revolutions range: 100 1000 rpm
- easily plugged into TC4, TC5 or TC6 central opening

Order code: BVT-ST1 + PalmSens control

Price: 290 + 60





USB Stirrer with speed control

- alternative for a rotating disc electrode
- control and power via USB
- precise control in the speed range 100 1000 rpm
- easily plugged into TC4, TC5 or TC6 central opening

Order code: BVT-USBSTIRRER

Price: 710

Handling fee for BVT sensors and accessories: EUR 30



BST Sensors





Thick film sensors

BST-100: WE C, RE/CE: Ag/AgCl
Order code: BST-100
Price/unit 20-100: EUR 6,20
Price/unit 101-500: EUR 5,20

BST-120: WE Pt, CE: Pt, RE: Ag
Order code: BST-120
Price/unit 20-100: EUR 6,30
Price/unit 101-500: EUR 5,30

BST-121: WE Au, CE Pt, RE Ag/Ag/Cl

Order code: BST-121
Price/unit 20-100: EUR 7,10
Price/unit 101-500: EUR 6,20

BST-122: WE C, CE Pt, RE Ag/Ag/CI

Order code: BST-122
Price/unit 20-100: EUR 6,20
Price/unit 101-500: EUR 5,20

BST-154: WE Au, RE/CE Ag/AgCl
Order code: BST-154
Price/unit 20-100: EUR 7,10
Price/unit 101-500: EUR 6,20



BST sensorcable

 Type TRIAD
 Type LEMO

 Order code:
 BST-SENS-TR
 BST-SENS-LM

 Price:
 EUR 70
 EUR 70

Alternative : PS-CONN, see page 18



BST Flow Cells:

1410 Flow cell for 2-electrode sensors 100 and 154 1411 Flow cell for 3-electrode sensors 120, 121 and 122

 Order code:
 BST-FC2 (1410)
 BST-FC3 (1411)

 Prices:
 EUR 540
 EUR 570

Handling fee for BST sensors: on request



CHI electrodes and cells

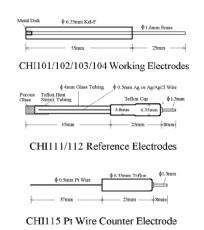
Accessories				
Order code:	price, EUR	Description Unit		
CHI101	150.00	2 mm dia. Gold Working Electrode 1		
CHI101P	390.00	2 mm dia. Gold Working Electrode, 3/pkg		
CHI102	150.00	2 mm dia. Platinum Working Electrode 1		
CHI102P	390.00	2 mm dia. Platinum Working Electrode 3/pkg		
CHI103	150.00	2 mm dia. Silver Working Electrode 1		
CHI104	150.00	3 mm dia. Glassy Carbon Working Electrode 1		
CHI104P	390.00	3 mm dia. Glassy Carbon Working Electrode 3/pkg		
CHI105	245.00	10 um Gold Microelectrode 1		
CHI105P	625.00	10 um Gold Microelectrode 3/pkg		
CHI106	245.00	25 um Gold Microelectrode 1		
CHI106P	625.00	25 um Gold Microelectrode 3/pkg		
CHI107	245.00	10 um Platinum Microelectrode 1		
CHI107P	625.00	10 um Platinum Microelectrode 3/pkg		
CHI108	245.00	25 um Platinum Microelectrode 1		
CHI108P	625.00	25 um Platinum Microelectrode 3/pkg		
Reference electrodes, auxiliary electrodes, cells etc.,				
CHI111	49.00	Ag/AgCl Aqueous Reference Electrode 1		
CHI111P	135.00	Ag/AgCl Aqueous Reference Electrode 3/pkg		
CHI112	49.00	Non-Aqueous Ag/Ag+ Reference Electrode 1		
CHI112P	135.00	Non-Aqueous Ag/Ag+ Reference Electrode 3/pkg		
CHI150	155.00	Calomel Reference Electrode 1		

CHI111P	135.00	Ag/AgCl Aqueous Reference Electrode 3/pkg
CHI112	49.00	Non-Aqueous Ag/Ag+ Reference Electrode 1
CHI112P	135.00	Non-Aqueous Ag/Ag+ Reference Electrode 3/pkg
CHI150	155.00	Calomel Reference Electrode 1
CHI115	135.00	Platinum Wire Counter Electrode 1
CHI115P	360.00	Platinum Wire Counter Electrode 3/pkg
CHI120	120.00	Electrode Polishing Kit 1
Cell		
CHI220	250.00	Simple Cell Stand
CHI221	75.00	Cell Top (including Pt wire counter electrodes)

Accessories and Instrument Chasis

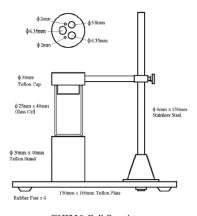
Glass cell

Teflon cap



10.00

50.00



CHI220 Cell Stand

Handling fee for CHI sensors and accessories: EUR 30



CHI222

CHI223

Gwent Group Ltd.



Number of WE: 1

Counter electrode: Carbon Graphite Paste Reference electrode: Ag/AgCl Paste 60/40

Substrate: Valox FR1 (alumina for surcharge available, see below)

Order Code: GG1-C.V GG1-Pt.V GG1-Au.V Product page (Price/unit (EUR) 3,10 9,50 9,00 BE2050824D1)	Description unit Carbon Graphite Paste Polymer Platinum Paste Gold Polymer Paste	•	Ø of WE: size of RE: dimension:	2 mm 0.5*1 50*10
GG2-C.V GG2-Pt.V GG2-Au.V Product page (3,10 9,50 9,00 BE2030605D1)	Carbon Graphite Paste Polymer Platinum Paste Gold Polymer Paste	CI	Ø of WE: size of RE: dimension:	4 mm 1.5*2 15*25

Number of WE: 16

CE/RE electrode: Ag/AgCl Paste 60/40

Substrate: Valox FR1 (alumina for surcharge available, see below)



Order Code: Price/unit (EUR) Description unit Ø of WE: 0.8 mm GG3-C.V 4,40 Carbon Graphite Paste 20*1 size of RE: GG3-Pt.V 11,30 Polymer Platinum Paste dimension: 45*19 GG3-Au.V 10,80 Gold Polymer Paste Product page (BE2061107D2)

Number of WE:

CE/RE electrode: Ag/AgCl Paste 60/40

Substrate: Valox FR1 (alumina for surcharge available, see below)



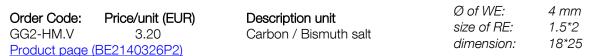
Order Code: Price/unit (EUR) Description unit Ø of WE: 6 mm GG4-C.V 3,50 Carbon Graphite Paste size of RE: GG4-Pt.V Polymer Platinum Paste on request dimension: 12*26.5 GG4-Au.V 10,10 Gold Polymer Paste

Number of WE: 1

Product page (BE2070921D1)

Counter electrode: Carbon Graphite Paste Reference electrode: Ag/AgCl Paste 60/40

Substrate: Valox FR1 (alumina for surcharge available, see below)



Extra for Alumina (e.g. GG1-C.A) substrate EUR 0.10/unit (EUR 1.40 for GG-C3, GG-Pt3, GG-Au3)

Handling fee for GWENT Group Ltd sensors: on request



MicruX





Thin-film Platinum or Gold single electrodes

 Order code:
 ED-SE1-Au
 ED-SE1-Pt

 Price:
 EUR 3.60
 EUR 3.60



Thin-film double-metal single electrodes (WE: Au / AE-RE: Pt)

Order code: ED-SE1-AuPt Price: EUR 6.40



Thin-film Platinum or Gold microelectrode array

 Order code:
 ED-mSE-5-Au
 ED-mSE-5-Pt

 ED-mSE-10-Au
 ED-mSE-10-Pt

 Price:
 EUR 4.35
 EUR 4.35



Thin-film Platinum or Gold interdigitated electrodes electrode width 10 μm electrode distance 10 μm

Order code: ED-IDE1-Au ED-IDE1-Pt Price: EUR 4.65 EUR 4.65



Thin-film Platinum or Gold interdigitated electrodes electrode width IDE2 10 μm , IDE3 5 μm electrodes distance 5 μm

 Order code:
 ED-IDE2-Au
 ED-IDE2-Pt

 Price:
 ED-IDE3-Au
 ED-IDE3-Pt

 EUR 5.90
 EUR 5.90



Thin-film Platinum or Gold interdigitated array microelectrodes (10 µm)

Order code: ED-IDA1-Au ED-IDA1-Pt Price: EUR 3.60 EUR 3.60



Thin-film Platinum or Gold interdigitated array microelectrodes (5 µm)

Order code: ED-IDA5-Au ED-IDA6-Au Price: ED-IDA5-Pt ED-IDA6-Pt EUR

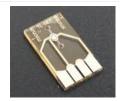
EUR 4.65 4.65



Thin-film Platinum or Gold interdigitated ring array microelectrodes (10 µm)

 Order code:
 ED-IDRA1-Au
 ED-IDRA1-Pt

 Price:
 EUR 3.60
 EUR 3.60



Thin-layer microfluidic Platinum or Gold single electrodes (based on ED-SE1)

 Order code:
 TL-SE1-Au
 TL-SE1-Pt

 Price:
 EUR 8.00
 EUR 8.00



Thin-layer microfluidic Platinum or Gold interdigitated electrodes with counter and reference electrode (based on ED-IDA)

Order code: TL-IDA1-Au TL-IDA1-Pt Price: EUR 10.50 EUR 10.50



Drop-cell connector

This connector is necessary to use the electrodes produced by Micrux. Just put the drop and measure. Supplied with a universal cable compatible with PalmSens3 and the EmStat series.

Order code: ED-DROP-CELL Price: EUR 195



All-in-one cell

This is a multipurpose interface with interchangeable add-ons for using Micrux electrodes. It is a Drop Cell base with two different add-ons: one for using it as a Flow Cell and the other one for using it in batch with higher volumes.

 Order code:
 ED-AIO-ADD-ONS
 ED-AIO-CELL-2x / ED-AIO-CELL-3x

 Price:
 EUR 255
 EUR 740 / EUR 915

Handling fee for MicruX sensors: on request



Rusens

RUSENS Ltd.



RUS-Unmodified 3-electrode structure

EUR 1.20 each for 1 to 50

1.10 each for >51

RUS-Prussian blue based H₂O₂ sensor

EUR 4.35 each

RUS-Superstable H₂O₂ sensor:

EUR 10.80 each



FTWJ: Flow-through wall-jet cell for Rusens sensors optional with flow damper

Order code: RUS- FTWJ
Price: EUR 300

RUS- FTWJ/FD EUR 420

Inc. flow damper



Batch cell for Rusens sensors:

Order code: RUS-BC Price: EUR 120

Handling fee for Rusens sensors: on request



PalmSens sensor accessories



Universal sensor connector

Universal sensor connector with 3 banana receptacles and a connection for the screen printed electrodes from BST, BVT, ItalSens, Rusens, Gwent's GG-Au4, GG-C4 and GG-Pt4 as well as DropSens.

Order code: PS-CONN
Price: EUR 20



Please do not hesitate to contact PalmSens for more details: info@palmsens.com

PalmSens BV The Netherlands www.palmsens.com

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