

EPO

PRODUCT LINE 2018 EPO ANALYSIS

for standardized
high sensitivity analysis
of erythropoiesis stimulating agents

Product Line EPO Analysis

Elevate your ESA analysis onto a new level of sensitivity and accuracy

1

System integration

- system integration for user-independent results

2

VELUM SAR PAGE

- one analysis for all ESAs
- no protein loss due to interference with plastic coating
- 25 / 40 samples per gel

3

Careful detection of ESAs

- high sensitivity ESA detection by chemiluminescence
- high sensitivity SEPO sample standards detection by fluorescence

4

SEPO technology

- lane specific monitoring of PAGE and transfer efficiency
- precise RP values per lane - independent on differences in electrophoresis

Analysis of ESAs

Integrated workflow - sensitive detection

The analysis of erythropoiesis stimulating agents (ESA) is based on a complex workflow of enrichment, gel-based separation and subsequent immunochemical detection.

Our product line is designed to ensure you the best sensitivity in ESA detection. System integration from protein separation, transfer, blot treatment, signal detection and analysis allow for easy, error-free handling as demanded in daily routine analysis.

VELUM SAR Precast Gels offer careful separation of up to 40 samples per gel and allow for high sensitivity detection of all ESAs in one analysis.

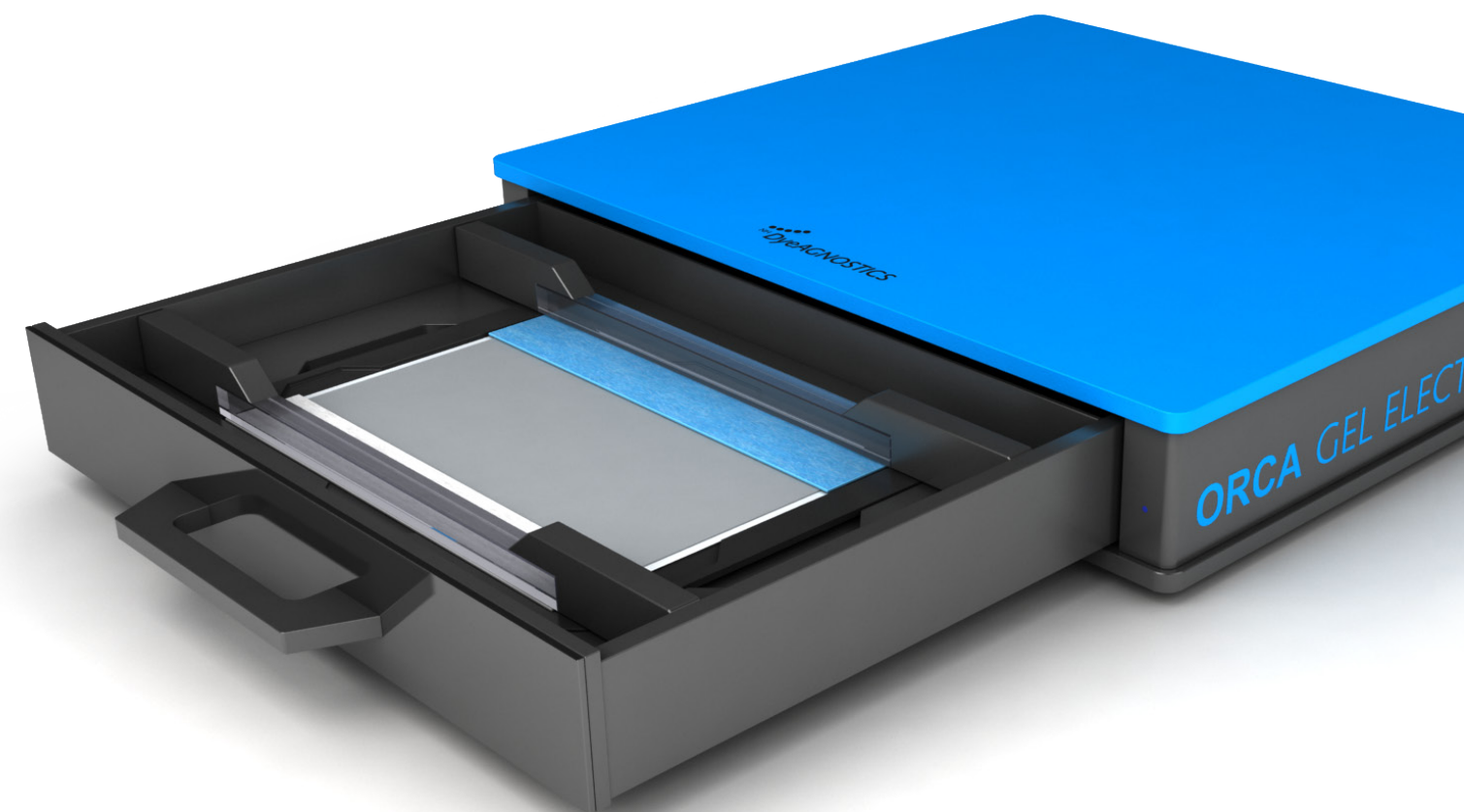
The electrophoresis of VELUM Gels is performed by the **ORCA Gel Electrophoresis** unit. No additional buffers are required, however the performance is the best available on the market.

The protein transfer from VELUM Gels to precut transfer membrane is ensured by the corresponding **VELUM Dry Blotter**, again no additional buffers required.

The blot procedure can be automatically performed using the BlotCycler. We provide replacement trays capable of holding one large blot (26 x 10cm) in each tray.

For the detection of ESAs the **Octoplus QPLEX** offers best sensitivity for both chemiluminescence and most powerful fluorescence over an imaging area of 30 x 24 cm.

Fluorescent **SEPO** standards, added to each sample, allow for the precise monitoring of the complex workflow as well as the precise RP value determination of every ESA in every lane.



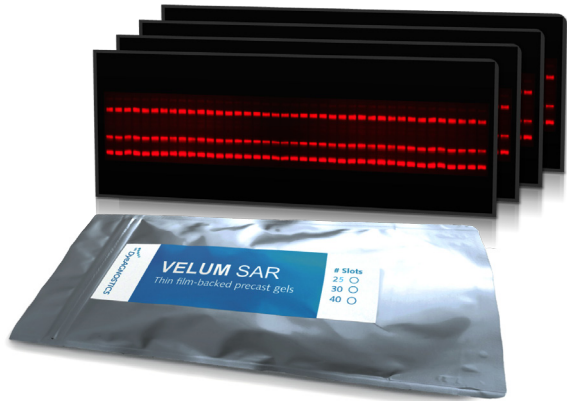
VELUM SAR Precast Gels

Sensitive detection of all ESAs in one analysis

The combination of VELUM SAR Precast Gels and the immunoblot allows to sensitively discriminate endogenous EPO from exogenous ESAs differing in either the electrical charge (EPO glycoforms) or molecular weight (EPO analogs/ biosimilars).

The VELUM SAR Precast Gels are available in different numbers of sample wells. VELUM Precast Gels come with ready-to-use buffered electrode wicks and do not need additional buffers.

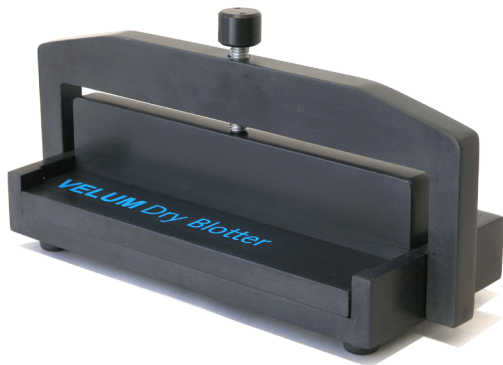
- detection all ESAs in one analysis
- provide high sensitivity ESA detection
- ready-to-use gels and electrode wicks, no additional buffers



VELUM Dry Blotter

High efficient protein transfer

The VELUM Dry Blotter is designed to transfer proteins from the gels to VELUM Western Blot membrane (VELUM Blotting Kit). The transfers is based on capillary action with best results in terms of ESA transfer quality and efficiency. The blotting does neither require power nor additional buffer.



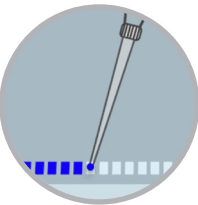
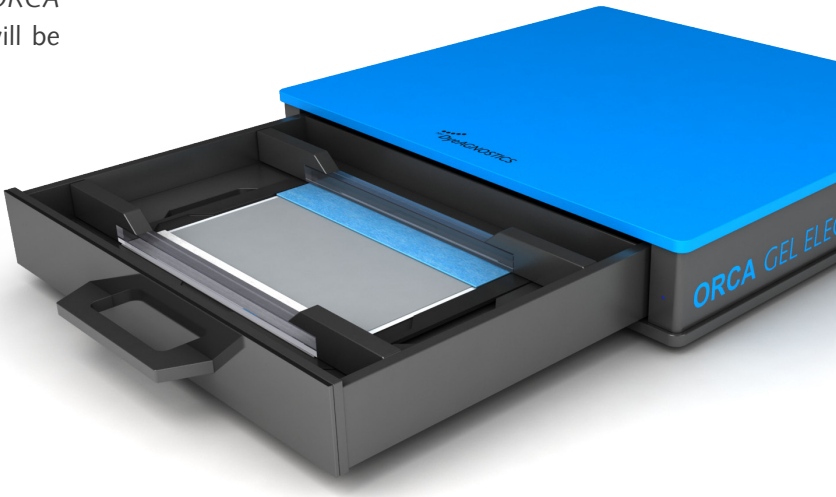
- guided placement of gel + membrane

ORCA Gel Electrophoresis

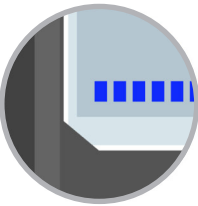
Easy guided usage, large sample throughput

When working with the ORCA Gel Electrophoresis unit and the corresponding VELUM Precast Gels the *ORCA Frame Technology* ensures that all components will be placed into the right position.

The sample loading can be performed by either using a single- or multi-channel pipette. The electrophoresis is performed according to the program corresponding to the VELUM Precast Gel.



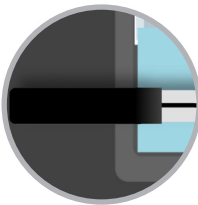
- simple sample loading with single or multi-channel pipette



- correct placement of gels by *ORCA Frame Technology*



- guided placement of wicks/gels by *ORCA Frame Technology*



- error-free placement of electrodes

SEPO Sample Standards

Sample monitoring and precise RP determination

Prior to electrophoresis, fluorescent SEPO sample standards are added to each sample. The fluorescent detection of the SEPOs allow to carefully monitor the complex workflow (figure 1), as well as to precisely determine the relative position (RP value) of the detected ESAs in every lane. The SEPO-based RP values are independent on electrophoretic differences in sample migration like the “smiley effect” (figure 2).

SEPO technology (patented) for monitoring:

- sample load
- separation efficiency of every lane
- protein transfer efficiency of every sample
- relative position (RP value) determination of every sample

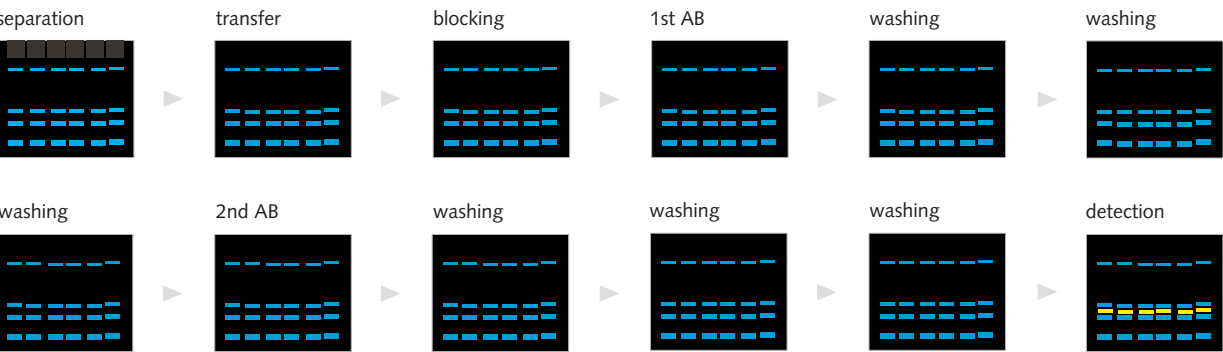
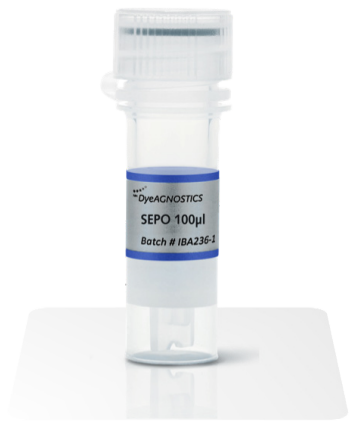


Fig. 1. SEPO based monitoring of the EPO analysis workflow.

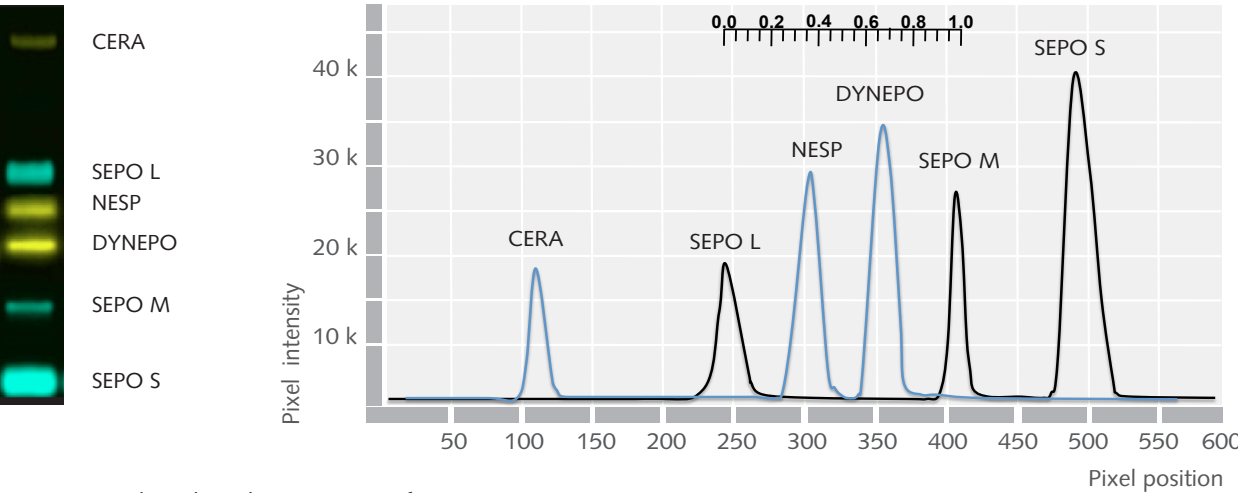


Fig. 2. SEPO based RP determination of ESAs.

Octopus QPLEX

High sensitivity many sample detection

The Octopus QPLEX combines fast image acquisition from large multicolor 1D gels and blots with high sensitivity and the robust setup for daily routine.

Based on superior CCD technology, high performance excitation of fluorophores, and on a fine tuned filter set, the system competes with laser scanners however up to 30x faster. Due to its sensitive chemiluminescence detection, the Octopus QPLEX is ideally suited for combined protein analysis using both chemiluminescence and fluorescence.

Product features

- high power fluorescence of up to 4 colors (RGB + NIR), almost same sensitivity as laser scanners but 30x faster
- homogenous fluorescence/ chemiluminescence detection of gels/ blots size up to 300 mm x 240 mm
- very robust sytem with easy handling- suitable even for untrained staff
- made in Germany



Product information

Prod. No. Description

PR138	Octoplus QPLEX Large Area Imaging System for high sensitivity chemiluminescence high power fluorescence
PR213-2	ORCA EPO Analyzer Imaging Unit (red fluorescence & ECL) Image Capture & 1D Analysis Software PC & Monitor
PRA201	VELUM Gel Frame for easy and correct placement of VELUM Precast Gels in the ORCA Gel Electrophoresis Unit
PR88	VELUM Dry Blotter for simple and highly efficient transfer of proteins from VELUM Precast Gels to Western blot membranes
PRA202	VELUM Imaging Tray for easy and correct placement of VELUM Precast Gels and Western blot mem- branes in the ORCA EPO ANALYZER
PR90	VELUM Blot Washing Tray suitable for BlotCycler
PR330	SEPO (for 200 or 1000 samples) red-fluorescent 1D standard for monitor- ing EPO workflow and determination of RP-values of ESAs

Prod. No. Description

PR816 SAR	Blotting Kit for VELUM Precast Gels including low-fluorescent PVDF transfer membrane & blotting papers pre-cut; sufficient for blotting of 4 gels
PR247	VELUM SAR Precast Gels 25 4 gels à 25 samples for Sarcosyl-PAGE including sample buffer & wicks for red-IR fluorescence and vis staining
PR249	VELUM SAR Precast Gels 40 4 gels à 40 samples for Sarcosyl-PAGE including sample buffer & wicks for red-IR fluorescence and vis staining
PR227	VELUM XLS Precast Gels 25 4 gels à 25 samples for SDS-PAGE incl. sample buffer & wicks for red-IR fluorescence and vis staining
PR223	VELUM XLS Precast Gels 52 4 gels à 25 samples for SDS-PAGE incl. sample buffer & wicks for red-IR fluorescence and vis staining
	VELUM IEF Precast Gels are available on request

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