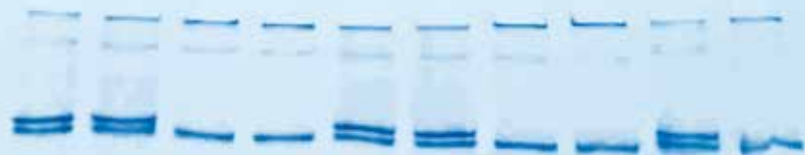


Native PAGE



Reagents and Equipment

Sample Preparation for Native PAGE

SERVA Native PAGE Gels

SERVA Native PAGE Buffers

SERVA Protein Standards

SERVA Stains for Native PAGE

Native PAGE Equipment

All you need for... Native PAGE

Blue and Clear Native electrophoresis in polyacrylamide gels (BN/CN PAGE) separates proteins according to their native state, i.e. by their intrinsic charge and size.

Blue Native PAGE (BN PAGE) makes use of Coomassie® Brilliant Blue G 250 to bind to the outer surface of protein complexes leading to a negatively charged protein-dye complex. The Blue G dye does not act as a detergent thus maintaining the native structure of the protein throughout the electrophoresis process. At physiological

pH, the protein-dye complexes migrate independently towards the anode. The repulsion between the negatively charged protein-dye complexes leads to high resolution and band sharpness.

Clear Native PAGE (CN PAGE) works without using any anionic dye. Therefore, migration of proteins through the gel is as well dependent from the intrinsic charge of the protein. This method can be used for separation of proteins with $pI < 7$ at physiological pH when dyes may interfere with further analytical methods.

1

Sample Preparation for Native PAGE

2

SERVA Native PAGE Gels

3

SERVA Native PAGE Buffers

4

SERVA Protein Standards

5

SERVA Stains for Native PAGE

6

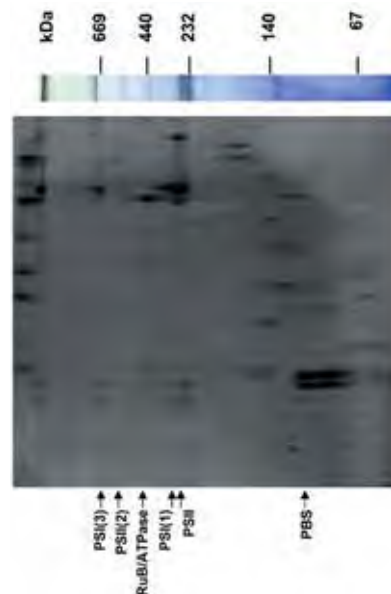
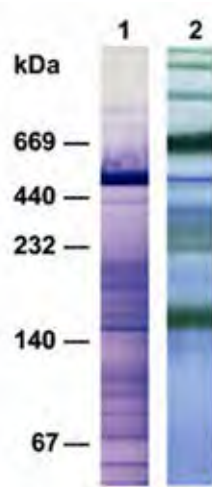
Native PAGE Equipment

SERVA produces gels for more than 30 years – hard to find a place with more experience in manufacturing, developing and supporting the use of electrophoresis gels!

2 SERVA Native PAGE Gels

SERVA developed precast gels optimized for a Blue Native/Clear Native PAGE system: SERVAGe™ N for BN and CN PAGE, complemented by buffers and Blue G solution for best results.

For native PAGE in a TRIS/Glycine buffer system SERVA offers the SERVAGe™ PRiME™ gels showing highest resolution with long shelf life.



Lane 1 = Separation of stroma thylakoid membrane complexes by CN PAGE
Lane 2 = Separation of thylakoid membrane complexes by BN PAGE. By courtesy of Friedrich Ossenbuehl (University of Ulm).

Separation of thylakoid membrane complexes by 2D BN/SDS PAGE. By courtesy of Friedrich Ossenbuehl (University of Ulm).

Precast Gels for Native BN/CN PAGE	15 wells	12 wells	10 wells
SERVAGe™ N 3-12 %	43254.01	43250.01	43251.01
SERVAGe™ N 4-16 %	43255.01	43253.01	43252.01
SERVAGe™ N Native Starter Kit	-	-	43204.01
Precast TRIS/Glycine PRiME™ Gels	15 wells	12 wells	10 wells
SERVAGe™ TG PRiME™ 8 %	43284.01	43260.01	43261.01
SERVAGe™ TG PRiME™ 10 %	43285.01	43263.01	43264.01
SERVAGe™ TG PRiME™ 12 %	43286.01	43266.01	43267.01
SERVAGe™ TG PRiME™ 14 %	43287.01	43269.01	43270.01
SERVAGe™ TG PRiME™ 4-12 %	43288.01	43273.01	43274.01
SERVAGe™ TG PRiME™ 4-20 %	43289.01	43276.01	43277.01
SERVAGe™ TG PRiME™ 8-16 %	43290.01	43279.01	43280.01

Coming soon: SERVA horizontal large format gels for native PAGE.

3

SERVA Native PAGE Buffers

SERVA offers a complete range of buffers for native PAGE.

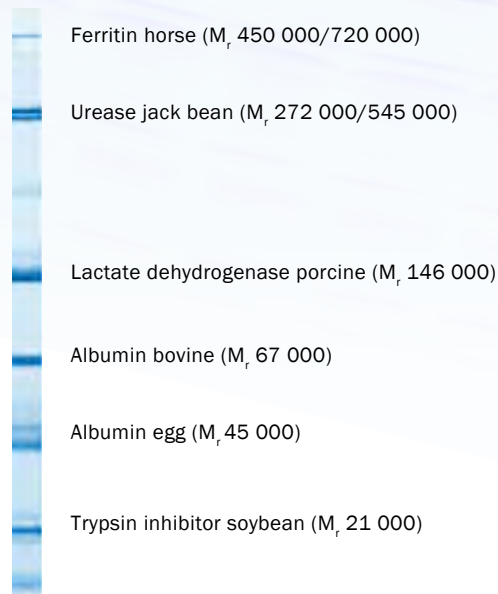
Product	Size	Cat. No.
Native Anode Buffer for Blue/Clear Native (10x)	1 L	42535.01
Native Cathode Buffer for Blue/Clear Native (10x)	500 ml	42536.01
Sample Buffer for Blue Native (2x)	20 ml	42533.01
Sample Buffer for Clear Native (2x)	20 ml	42534.01
SERVA Blue G solution for BN, 1 %	20 ml	42538.01
SERVA Tris-Glycine Native Electrophoresis Buffer (10x)	1 L	42530.01
SERVA Tris-Glycine Native Sample Buffer (2x)	20 ml	42528.01

4

SERVA Protein Standards

The **SERVA Native Marker Liquid Mix for BN/CN PAGE** is ready-to-use and contains 6 different proteins ranging from 21 up to 720 kDa.

The **Protein Molecular Weight Standards Kit** is a set of 8 single proteins. Proteins are lyophilized and could easily be dissolved in water or sample buffer to the desired final concentration.



SERVA Native Marker Liquid Mix for BN/CN PAGE (cat. no. 39219) separated by Clear Native PAGE on SERVAGE[™] N 4-16 % (cat. no. 43252)

Product	Size	Cat. No.
SERVA Native Marker Liquid Mix for BN/CN PAGE	5x 50 μ l	39219.01
Protein Molecular Weight Standards*	1 kit	39064.01

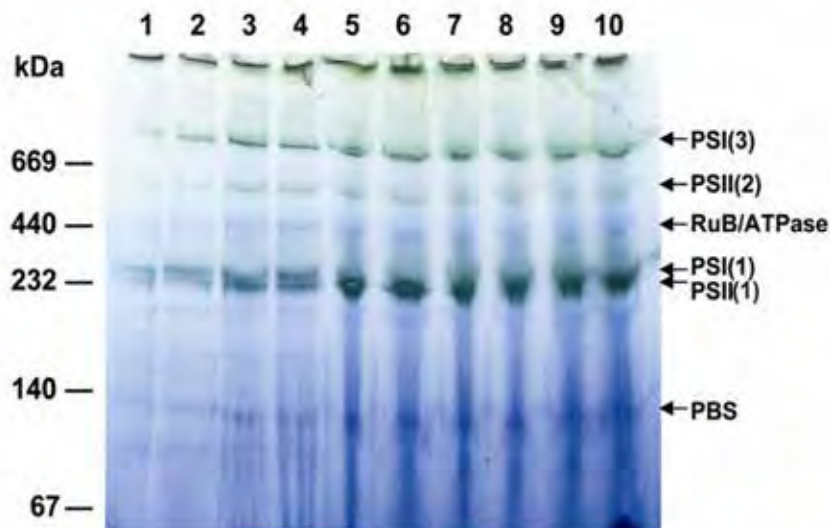
*25 mg each of Ferritin horse, M_r 450 000; Catalase bovine, M_r 240 000; Aldolase rabbit, M_r 160 000; Albumin bovine, M_r 67 000; Albumin egg, M_r 45 000; Chymotrypsinogen A, M_r 25 000; Myoglobin equine, M_r 17 800; Cytochrome C, M_r 12 400.

5

SERVA Stains for Native PAGE

Native PAGE gels are stained with Coomassie®, silver or zinc-imidazole buffer containing Coomassie® Blue G after half of the run time against cathode buffer without dye. Native PAGE gels change the cathode

	Quick Coomassie® Stain	Silver Staining Kit Native PAGE
Type of Stain	1-step, non-toxic colloidal Coomassie® G-250	Fast, MS-compatible silver stain
Detection	Visual, colorimetric	Visual, colorimetric
Sensitivity	5 ng	1 ng
Staining time	15 min	45 - 60 min
Quantification	✓	X
MS compatible	✓	✓
Re-usable	✓	X
No. of gels stained	40 - 120	25
Size	1 L	1 kit
Cat. no.	35081.01	35077.01



Separation of increasing amounts of thylakoid membrane from *Synechocystis* (lane 1 = 1 µg, ... lane 10 = 10 µg). After half of the run the blue cathode buffer has been replaced by colourless cathode buffer. By courtesy of Friedrich Ossenbuehl (University of Ulm).

SERVA offers a broad range of staining kits for protein gels, not only for native PAGE but also for SDS PAGE, IEF and 2D electrophoresis.

Native PAGE Equipment

BlueVertical™ PRiME™ & TankBlotter

- Dual mini tank systems
- Accommodates 1 – 2 gels in cassettes with outer dimensions of 10 cm x 10 cm x 0.7 cm
- Leak-free inner core unit with a unique clamp system
- Unique, easy-to-handle blotting insert for tank blotting
- Gel Casting Stand for pouring two gels
- Quality designed and made in Germany



Product	Size	Cat. no.
BlueVertical™ PRiME™	1 unit	BV-104
BlueVertical™ PRiME™ TankBlot	1 unit	BV-104-TB
BlueVertical™ PRiME™ Casting Stand	1 unit	BV-104-CS
BlueVertical™ PRiME™ Blot Module	1 unit	BV-104-B

BluePower™ Power Supply

- For vertical mini gel electrophoresis: BluePower™ 600 PRiME™ Power Supply (600 V, 1000 mA, 300 W)
- Fully programmable (9 programmes with 9 steps each)
- 4x 2 outlets



Product	Size	Cat. no.
BluePower™ 600 PRiME™ Power Supply	1 unit	BP-600-PRI

Digital Imaging and Analysis System

- Fast and convenient gel documentation system
- Includes darkroom cabinet, UV filter, digital SLR camera
- Optional available: UV-, white- and blue-light transilluminator, epi-white light, LabImage 1D analysis software
- Stable metal housing
- Large door for easy gel handling
- WxHxD: 420 mm x 550 mm x 520 mm; weight: approx. 12 kg



Product	Size	Cat. no.
Digital Imaging and Analysis System III	1 system	DIAS-III



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