

# Western Blotting

The complete range by biostep®



**biostep®**

It's all about Bio-Imaging.

[www.biostep.de](http://www.biostep.de)

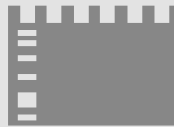
# The way to Western Blots

## The perfect workflow with biostep® instruments

Lysis of samples in the  
homogenizer Bullet Blender®



Protein electrophoreses in vertical  
chambers



Transfer of proteins by  
Semi-Dry Blotting



BlotBot® for incubating and washing  
of the blot membranes



Celvin® S for chemiluminescence-  
detection



Analysis software



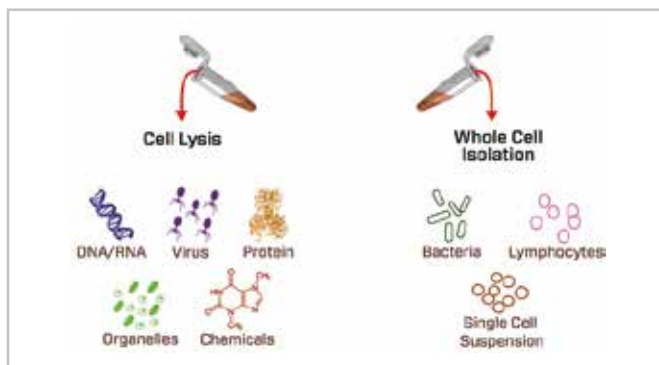
**Homogenization and lysis of tissue samples or cells for isolation of organelles, DNA, RNA, proteins and other cell contents e.g. of bacteria, cultured cells, animal and plant tissue**

**How it works:**

Fill your sample material including buffer together with suitable beads into special tubes. A rotating mallet in the Bullet Blender® hits the tubes outside and the beads homogenize the samples. After maximum 5 minutes, your samples are completely degraded. According to the sample material, different beads are used. The Bullet Blender® is also available for big volumes and with dry-ice cooling.

**Comparison of Bullet Blender® models**

Parameter	Standard BBX24	Blue BBX24B	Storm BBY24M	Gold BB24-AU
Up to 24 samples at once	✓	✓	✓	✓
Speed freely adjustable	✓	✓	✓	✓
Powerful for tough samples			✓	✓
Cooling at 4°C by dry ice				✓
With air cooling		✓	✓	✓



Different beads (stainless steel, glass, zirconium oxide, zirconium silicate)



Bullet Blender® Standard



Bullet Blender® Gold with dry-ice cooling

# Vertical chambers for separation of proteins

The separation of the proteins follows the sample preparation. We offer suitable chambers in the sizes 10 x 10 cm, 20 x 10 cm and 20 x 20 cm. You can work with up to 4 self-cast gels. There is no necessity for glass plate transfer. It has a modular tank system with inserts for PAGE and blotting. Additionally, we offer accessories like combs, spacers and glass plates.



Electrophoresis chamber GV 102

## Excerpt of our vertical chamber range

Parameter	GV 102
Gel size	10 x 10cm
For self-cast and pre-cast gels	✓
Gel casting rack	✓
Max. amount of self-cast gels	4
Max. amount of samples	4 x 20

## Semi-Dry Blotter for transfer of proteins

Our semi-dry blotters are for a rapid transfer of your proteins from the gel to Western Blot membranes. They are suitable for DNA and RNA and for gels from 0.25 up to 10mm thickness.

Parameter	V10-SDB	V20-SDB
Blot area 10 x 10cm	✓	-
Blot area 20 x 20cm	-	✓
Gels on top of each other possible	✓	✓



Semi-Dry Blotter

# BlotBot® for automated incubating and washing of blot membranes

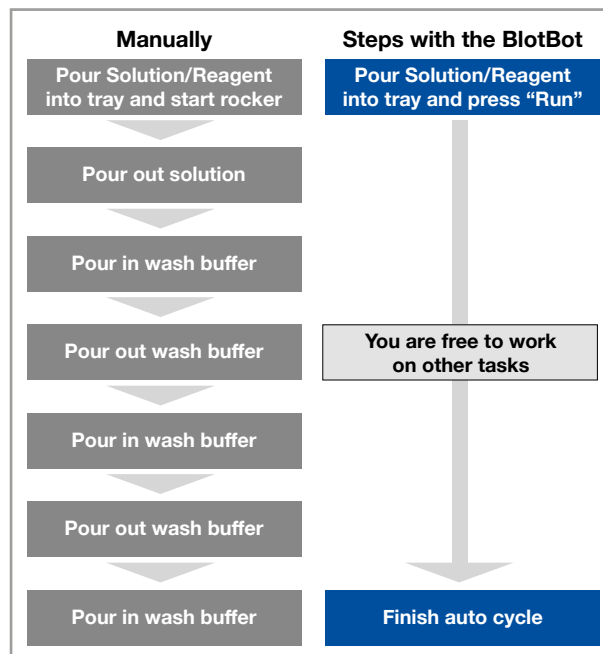
The following incubation steps take place in the BlotBot® as your time is too valuable to waste it with “Blot sitting”. The BlotBot® agitates your blots according to the programs you set and changes buffers and reagents automatically.

Forget your stopwatch. Fill the washing buffer in the storage bottle and the antibody solution in the tubes.

Position the blot membranes in the tray and submerge them with blocking solution.

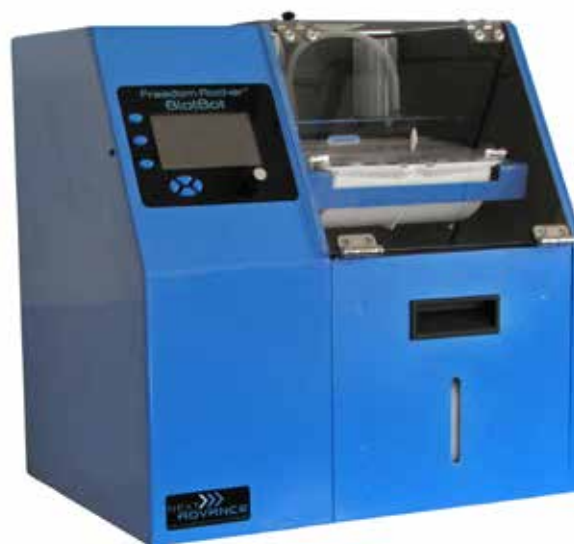
All other steps will proceed autonomously.

- Programmable with 9 methods
- Every method can contain 9 steps
- Rocking speed 5 up to 40 x per minute
- Big storage bottle (2l) for washing buffer
- Big waste container
- Both antibody solutions can be recovered
- Two trays: for two mini blots or one midi blot
- Works autonomously from blocking up to the last washing step
- Easy, user-friendly menu and programming
- Two models: BlotBot® 120 for up to 2 mini blots, BlotBot® 240 for up to 4 mini blots
- Trays can be easily changed
- Suitable also for colorimetrically stained gels like Coomassie®



## BlotBot® 240

Parameter	
Gel size	mini and midi
Max. blots at once	2 midi, 4 mini
Dimensions (W x D x H in cm)	56 x 41 x 46



## BlotBot® 120

Parameter	
Gel size	mini and midi
Max. blots at once	1 midi or 2 mini
Dimensions (W x D x H in cm)	37,5 x 41 x 46

# Detection of Western Blots with Celvin® S

## Ideal for your chemiluminescent Western Blots

- ▶ **Cost efficient, no CL-films necessary, no waste, no decomposition, no scanning**
- ▶ **Suitable for white-light images of colorimetrically-stained gels and blots**
- ▶ **Unknown exposure time? Serial mode always gives best results**
- ▶ **Multi-way calibration of camera for no background signals**
- ▶ **Fluorescence module for many common fluorophores. Other filters possible. Easy change in filter wheel**

## New: Fluorescence module available

LEDs (color and range)	Maximum of excitation spectrum	High quality interference bandpass emission filters	Band width
UV (360 - 400nm)	365nm	550nm	40nm
Blue (410 - 520nm)	470nm	615nm	22nm
Green (450 - 590nm)	525nm	700nm	50nm
Red/NIR (590 - 680nm)	625nm	810nm	50nm

## Advantages

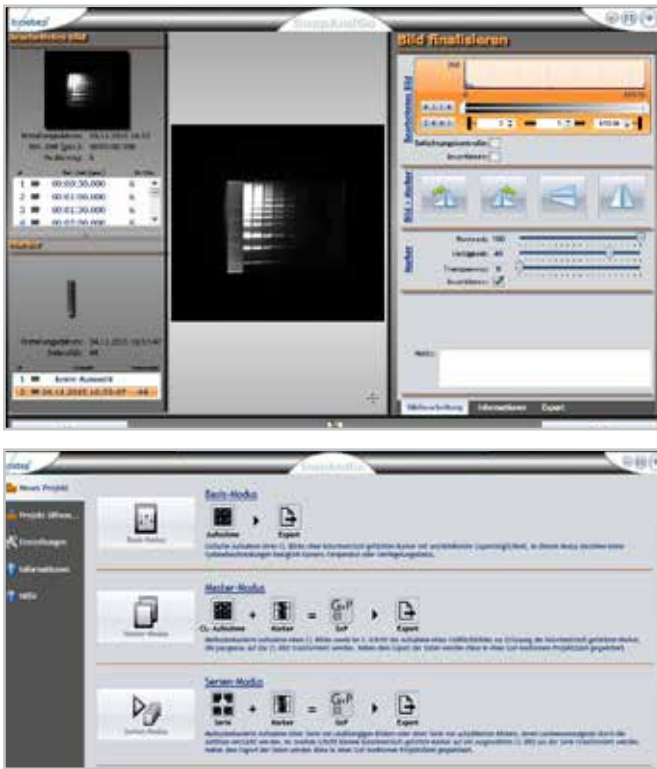


## Camera, optics and illumination

- Powerful, cooled 16-bit-CCD-camera
- Resolution up to 8.3 Mpixel
- Excellent detection sensitivity for all chemiluminescence applications
- Maximum exposure time 24 hours
- Hardware binning up to 6 x 6
- Acquisition of image series for signal reinforcements
- White epi light with intensity 1 – 100% for colorimetrically-stained markers

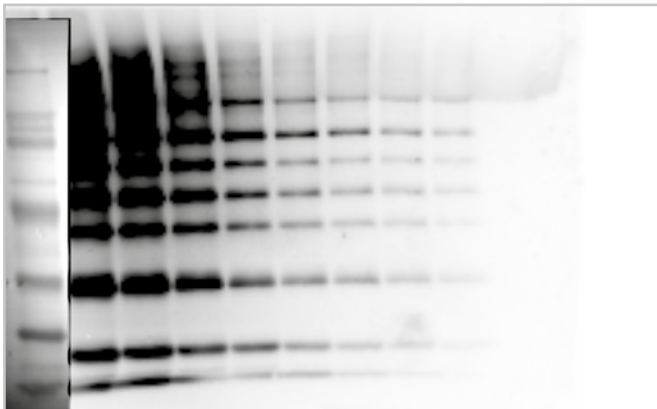
## New standard for personal CL detection

- Practical measuring safety by electromagnetic locking
- Sensitive CCD „EagleIce®“ camera by biostep® development and production
- One-hand operation by touch screen with status information
- Small, compact and space saving CL-system
- Storage of acquisition settings in individual, application dependent methods
- Comfortable and automatic handling via user-friendly software SnapAndGo®



## Control software SnapAndGo®

- Complete control of Celvin® systems
- Easy, intuitive handling
- Many basic settings
- Setting of acquisition methods for different sample types
- Diverse acquisition scenarios
- Capture, storage and print out of acquisition parameters for each image
- Function for insertion of colorimetrically-stained markers in the CL-image
- Multiple image optimization options
- Image export as row data and optimized image for presentation
- Export in four file formats
- Direct export to analysis software for 1D gels
- CL-image and marker image can be optimized separately



## ADVANTAGE

### Overlay of white light marker(s) with CL-image

- Exact positioning of MW marker(s)
- One image for exact quantification of CL bands and their MW calculation

### Functional principle:

- Acquisition of CL blot as single image or image series
- Acquisition of colorimetrically-stained marker(s) with white epi light
- Integration and inversion of the cut marker(s) in CL image



## Analysis software for different applications

- automated analysis of:
  - 1D gels
  - TLC
  - blots
  - arrays
  - Dot/Slot Blots
  - microtiter plates
  - autoradiograms
- Background reduction
- Normalization
- MW calibration
- Quantification

## About biostep®

### biostep® - made in Germany

Since 1997, biostep® offers different products for Bio-Imaging. In Burkhardtsdorf (Saxony), we develop and produce instruments incl. software according to German quality standards for users worldwide.

At the beginning, we focused on radioanalytic measurement technology and UV-transilluminators. As time went on, we developed different gel documentation systems as well as chemiluminescent and fluorescence imager by systematic research.

In 2012 we took over the world-famous and established product line of Thin-layer chromatography (TLC/HPTLC) of the company Desaga GmbH. Due to some technical common features of these differentiated application fields there are numerous synergy effects for customers benefit in both areas.

After 20 years of experience, the team of biostep® GmbH is established as a leading developer and producer of different transilluminators, dark hoods, documentation systems, imagers and densitometers mainly in the field of molecular biology as well as thin-layer chromatography.

### Test yourself!

**Today, biostep® is YOUR Specialist for Bio-Imaging.**



### biostep® GmbH

Innere Gewerbestraße 7  
09235 Burkhardtsdorf, Germany  
T +49(0) 3721-39 05-0  
F +49(0) 3721-39 05-28  
info@biostep.de