

MB523

HiPurA® 96 Plant Genomic DNA Purification Kit

Kit Contents

Product Code	Reagents provided	MB523
		1X96 Preps
DS0016	Lysis Buffer (PL)	50 ml
DS0054	Additive-I	325 mg
DS0017	Precipitation Buffer (PS)	23 ml
DS0018	Binding Buffer Concentrate (BB)	50 ml
DS0019	Wash Solution Concentrate (WSP)	30 ml
DS0040	Elution Buffer (ET) [10mM Tris-Cl, pH 8.5]	30 ml
DS0003	RNase A Solution (20 mg/ml)	3 ml
DBPL-96-01	HiPurA® 96-well DNA Plate	1 no.
LWB-96	HiPurA® 96-well Block (2.2 ml)	1 no.
LWB-16-96	HiPurA® 96-well Block (1.6 ml)	2 nos.
PR11	HiPurA® Silicon Pad for sealing	1 no.
DBH-96-01	HiPurA® 96-well HiShredder	1 no.
DVB-96	HiPurA® 96-well V-Block	1 no.

Intended Use

Recommended for isolation of DNA from Plant samples.

Introduction

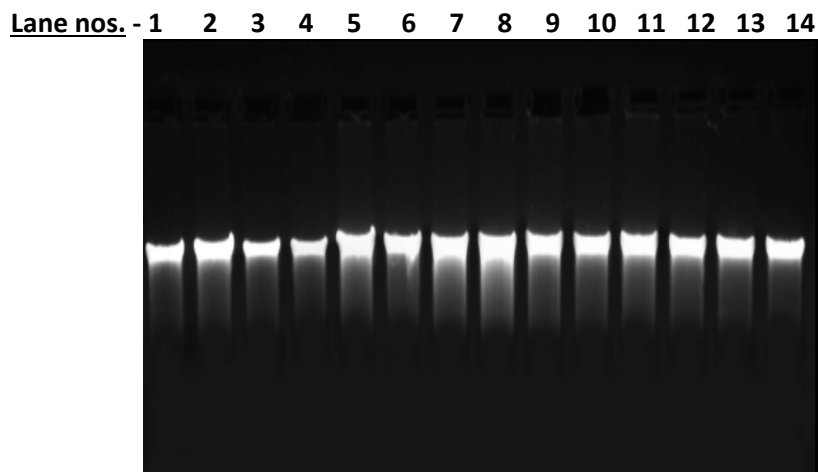
The HiPurA® 96 Plant Genomic DNA Purification Kit provides a fast and easy method for purification of total DNA from plant for reliable applications in PCR and Southern blotting technique etc. The DNA purification procedure using the 96-well format comprises of three steps viz. adsorption of DNA to the membrane, removal of residual contaminants and elution of pure genomic DNA. This kit uses the principle of silica binding in a 96-well format that eliminates the need for expensive resins, alcohol precipitation and hazardous organic compounds such as phenol and chloroform. The DNA obtained is compatible with downstream applications such as restriction enzyme digestion, PCR and Southern blotting.

HiPurA® 96 Plant Genomic DNA Purification Kit

This kit simplifies isolation of DNA from fresh plant material with spin column procedure in a 96-well format. The procedure is optimized for a maximum of 50-100 mg of wet-weight starting material. The samples (fresh) are cut and ground in liquid nitrogen using tissue lyser system or tungsten carbide bead beating system or by grinding in a mortar and pestle. The ground tissue is then mixed with the Lysis Buffer (PL). Protein precipitation is followed by removal of other contaminants using HiPurA® 96-well HiShredder. The flow-through fraction is then mixed with a solution that enhances the binding of DNA to the HiPurA® 96-well DNA Plate.

The solution is then passed through the DNA Plate that is followed by washing steps to remove trace contaminants. High quality DNA is eluted in the Elution Buffer (ET) provided in the kit. Typical yield from 50-100 mg of wet weight sample is 1-15 µg.

**Representative Gel Picture of Genomic DNA Isolated from Mint leaves
using MB523 - HiPurA® 96 Plant Genomic DNA Purification Kit**



HiPurA® 96-well DNA Plate (DBPL-96-01)

HiPurA® 96-well DNA Plate is based on the advanced silica binding principle presented in a centrifugation and vacuum format. The system efficiently couples the reversible nucleic acid-binding properties of the advanced silica membrane to yield high quantity of DNA. It facilitates the binding, washing and elution steps thus enabling multiple samples to be processed simultaneously. It eliminates the need for alcohol precipitation, expensive resins, and harmful organic compounds such as phenol and chloroform, otherwise employed in traditional DNA isolation techniques. DNA binds specifically to the advanced silica-gel membrane while contaminants pass through. PCR inhibitors such as divalent cations and proteins are completely removed during wash steps, leaving pure nucleic acids to be eluted in the buffer provided with the kit.

HiPurA® 96-well HiShredder (DBH-96-01)

For the HiPurA® 96 Plant Genomic DNA isolation procedure, contaminants such as cell debris, salt precipitates are removed through a HiPurA® 96-well HiShredder (DBH-96-01). The HiPurA® 96-well HiShredder removes all cell debris and precipitates making the preparation of clear lysate rapid and efficient, which is essential to prevent clogging of the HiPurA® 96-well DNA Plate (DBPL-96-01) used in the subsequent steps.

Elution

The yield of plant genomic DNA depends on the sample type and the number of cells in the sample. Elution with 200 µl of Elution Buffer (ET) will provide sufficient DNA to carry out multiple amplification reactions. Elution with volume less than 200 µl will increase the final DNA concentration, but will reduce the overall DNA yield. The eluted DNA ranges in size upto 20-30 kb, and is suitable for direct use in PCR, restriction digestion, and Southern blotting applications etc.

Concentration, yield, and purity of DNA

Spectrophotometric analysis and agarose gel electrophoresis will reveal the concentration and the purity of the DNA. Use Elution Buffer (ET) to dilute samples and to calibrate the spectrophotometer, measure the absorbance at 260 nm, 280 nm, and 320 nm using a quartz microcuvette. Absorbance readings at 260 nm should fall between 0.1 and 1.0. The 320 nm absorbance is used to correct for background absorbance. An absorbance of 1.0 at 260 nm

corresponds to approximately 50 µg/ml of DNA. The $A_{260}-A_{320}/A_{280}-A_{320}$ ratio should be 1.6–1.9. Purity is determined by calculating the ratio of absorbance at 260 nm to absorbance at 280 nm. DNA purified by HiPurA® 96 Plant Genomic DNA Purification Kit is free of protein and other contaminants that can inhibit enzymatic reactions or any downstream applications.

Concentration of DNA sample (µg/ml) = 50 x A_{260} x dilution factor.

Materials needed but not provided

- For processing of 96 samples, use of Tissue Lyser System for disruption and homogenization is recommended.
- Tabletop Centrifuge with 96-well rotor and plate carriers, capable of attaining at least 6,000 rpm or Vacuum Manifold for 96 well plate
- Vacuum source regulator (pump) (capable of giving negative pressure of 25 to 30 inches Hg)
- Vacuum regulator
- Multi-channel pipette with tips
- Ethanol (96-100%)
- Incubator at 70°C

Storage

Store the HiPurA® 96 Plant Genomic DNA Purification Kit between 15-25°C except certain components as specified on each labels. Under recommended condition kit is stable for 1 year

General Preparation Instructions

1. Preheat a water bath or heating block to 95°C.
2. **Thoroughly mix reagents.**
Examine the reagents for precipitation. If any kit reagent forms a precipitate (other than enzymes), warm at 55-65°C until the precipitate dissolves and allow cooling to room temperature (15-25°C) before use.

3. Dilute Binding Buffer Concentrate (BB) (DS0018) as follows:

Number of Preps	Binding Buffer Concentrate (BB)	Ethanol (96-100 %)
1X96 Preps	50 ml	25 ml

4. Dilute Wash Solution Concentrate (WSP) (DS0019) as follows:

Number of Preps	Wash Solution Concentrate (WSP)	Ethanol (96-100 %)
1X96 Preps	30 ml	70 ml

5. Prechill the mortar and pestle to –20°C before use.
6. Dissolve 2.6 mg of Additive-I per 400 µl of Lysis Buffer (PL) and heat the solution to 95°C before use.

RNase A enzyme treatment

RNase A is a type of RNase that is commonly used in research. RNase A (e.g., bovine pancreatic ribonuclease A) is one of the sturdiest enzymes in common laboratory usage. It cleaves 3'end of unpaired C and U residues.

Unit Definition for RNase A

One unit of the enzyme causes an increase in absorbance of 1.0 at 260nm when yeast RNA is hydrolyzed at 37°C and pH 5.0. Fifty units are approximately equivalent to 1 Kunitz unit. It is completely free of DNases and proteases. The specific activity is 90 U/mg.

The product as supplied is stable at room temperature (15-25°C).

Centrifugation

All centrifugation steps are carried out in conventional laboratory centrifuge e.g. Beckman CS-6KR, Heraeus Varifuge 3.0R, or Sigma 6k10 with swinging bucket rotors with adaptors and carriers for 96-well format. The 96-well accessories provided with the kit are compatible with almost all laboratory centrifuges and rotors. All centrifugation steps are performed at room temperature and are given in g, the correct rpm can be calculated using the formula:

$$RPM = \sqrt{RCF/1.118} \times 10^5 r$$

where *RCF* = required gravitational acceleration (relative centrifugal force in units of g); *r* = radius of the rotor in cm; and *RPM* = the number of revolutions per minute required to achieve the necessary *g*-force.

General Note:

1. Vacuum protocol as well as centrifugation protocol can be performed for plant genomic DNA isolation. For a vacuum protocol, negative pressure of 30 mm Hg is required to achieve optimum results.
2. The HiPurA® Silicon Pad for sealing (PR11) used in the protocol should not be discarded. It can be reused after wiping with ethanol and washing properly.

DNA Isolation Protocol

For a 96-well format, processing of multiple samples at the same time is not feasible. Delay in continuing of DNA isolation may result in degradation of DNA and thus lower yield. Disruption and homogenization of plant tissue using Tissue Lyser System is recommended. Alternatively, bead beating for lysis of plant material can also be used.

Sample preparation (Grinding):

It is preferable to use young plant parts especially leaves, needles (in case of pine, fir etc), since they contain more cells per weight and therefore result in higher yields. Also, young leaves and needles contain less polysaccharides and polyphenolics and are therefore easier to handle. Finely chop 50-100mg leaf material and grind properly using a mortar and pestle in liquid nitrogen to a fine powder. Allow the liquid nitrogen to evaporate. **DO NOT ALLOW THE SAMPLE TO THAW** (keep samples on ice if needed). Proceed immediately to the DNA isolation protocol.

NOTE: Midrib should be removed from the leaf material before grinding, as the midrib is a major source of carbohydrate contamination.

This kit is optimized for leaf tissues; however, it can also be used with other plant tissues.

Specimen Collection and Handling

For leaves/ flowers/ fruits/ stem

Collect plant tissue in a sterile container and freeze the sample at -20°C for short term storage or -80°C for long term storage.

For roots

Remove excess soil and collect plant tissue in a sterile container and freeze the sample at -20°C for short term storage or -80°C for long term storage.

Types of Specimen

Samples: leaves, flowers, fruits, stem and roots

Procedure

Vacuum based protocol:

1. To each well of HiPurA® 96-well Block (2.2 ml) (LWB-96) containing ground plant material (using tissue lyser or bead beating), immediately add 400 µl of Lysis Buffer (PL) (DS0016) containing Additive-I (DS0054) (preheated to 95°C) using multi-channel pipette (LA547/LA549) for easy solution delivery to each well.
2. Seal the HiPurA® 96-well Block (2.2 ml) (LWB-96) using the provided HiPurA® Silicon Pad for sealing (PR11) and mix vigorously by vortexing.

NOTE: For the preparation of Lysis Buffer (PL) refer General Preparation Instructions.

3. Incubate the mixture for 10 minutes at 95°C; mix the contents 2-3 times by gentle vortexing.
4. Add 130 µl of Precipitation Buffer (PS) (DS0017) to the lysate in each well, mix by gentle vortexing and incubate for 5 minutes on ice.
5. Centrifuge the 96-well DNA Block (2.2 ml) along with the sample at 5,500 x g (6000) rpm for 5 minutes.
6. **HiPurA® 96-well HiShredder (DBH-96-01)**
Transfer the supernatant without disturbing the pellet to the HiPurA® 96-well HiShredder (DBH-96-01) assembled over the 96-well DNA Block (1.6 ml) (LWB-16-96).
7. Connect the vacuum manifold (LA664) to the vacuum source. Remove the manifold top and place a HiPurA® 96-well Block (1.6 ml) (LWB-16-96) into the manifold base to collect the flow-through liquid. Replace the manifold top and place the HiPurA® 96-well HiShredder onto the manifold top. Seal it with HiPurA® Silicon Pad for sealing (PR11).

NOTE: Any Vacuum manifold, which can accommodate 96-well plates, such as the Vacuum manifold for 96 well plate (LA664) can be used with the HiPurA® 96-well HiShredder. **Make sure that the vacuum manifold can give a negative pressure of 30 inches Hg**. We recommend the use of a vacuum regulator to adjust the negative pressure.

NOTE: -30 inches Hg is equivalent to approximately 1000 mbar and 15 psi.

8. Turn on the vacuum source and adjust it to achieve -30 inches Hg of pressure. Continue to draw vacuum through the plates until no liquid remains in any of the wells of HiPurA® 96-well HiShredder. Turn off the vacuum source and release the vacuum from inside of the vacuum manifold using the vacuum regulator. Remove the HiPurA® 96-well HiShredder from the manifold and temporarily set it aside on a piece of absorbent toweling (tissue paper stacks) or plastic wrap.
9. Transfer the flow-through fraction from the above step to HiPurA® 96-well Block (1.6 ml) (LWB-16-96) without disturbing the cell debris pellet.
10. Add 20 µl of RNase A Solution (20 mg/ml) (DS0003) to the flow-through fraction in each well and incubate at room temperature for 10 minutes.
11. **Binding**

(Prepare the Binding Buffer as indicated in General Preparation Instructions)

Add 1.5 volumes of Binding Buffer (BB) (DS0018) to the lysate and mix by pipetting.

NOTE: E.g. To 450 µl of lysate, add 675 µl of Binding Buffer (BB). The volume of buffer can be reduced accordingly if less lysate is obtained. A precipitate may form after the addition of Binding Buffer but this will not affect the DNA isolation procedure.

12. Load lysate in HiPurA® 96-well DNA Plate (DBPL-96-01)

Add 650 µl of the mixture from step 10, including any precipitate, which may have formed, to the HiPurA® 96-well DNA Plate (DBPL-96-01). Connect the vacuum manifold to the vacuum source. Remove the manifold top and place a HiPurA® 96-well Block (1.6 ml) (LWB-16-96) into the manifold base to collect the flow-through liquid. Place the HiPurA® 96-well DNA Plate (DBPL-96-01) onto the manifold top.

13. Turn on the vacuum source and adjust it to -30 inches Hg. Continue to draw vacuum through the plates until no liquid remains in any of the wells of the HiPurA® 96-well DNA Plate.

14. Turn off the vacuum source and release the vacuum from inside of the vacuum manifold using the vacuum regulator. Remove the HiPurA® 96-well DNA Plate (DBPL-96-01) from the manifold and temporarily set it aside on a piece of absorbent toweling (tissue paper stacks) or plastic wrap.

NOTE: Discard the flow-through liquid from HiPurA® 96-well Block (1.6 ml) (LWB-16-96) and reuse the block.

15. Repeat steps 11-13 with the remaining sample. Discard the flow-through liquid.

16. Wash

(Prepare the Wash Solution as indicated in General Preparation Instructions)

Add 500 µl of diluted Wash Solution (WSP) (DS0019) to each well of HiPurA® 96-well DNA Plate (DBPL-96-01). To seal the plate, cover it with HiPurA® Silicon Pad for sealing (PR11). Continue to draw vacuum until no Wash Solution is present in any of the wells. Discard the flow-through liquid and reuse the block.

17. Add another 500 µl of the diluted Wash Solution (WSP) to each well of HiPurA® 96-well DNA Plate (DBPL-96-01). Draw vacuum until no Wash Solution is present in any of the wells.

18. Discard the flow-through liquid, reuse the block and apply vacuum for 10 minutes at negative pressure 30 inches of mercury to remove the traces of ethanol present in the Wash Solution.

19. Turn off the vacuum source and release the vacuum. Remove the HiPurA® 96-well DNA Plate (DBPL-96-01) from the vacuum manifold and tap the plate approximately 6-8 times on several layers of absorbent toweling (tissue paper stacks). Be careful not to damage the drip directors on the underside of the plate.

NOTE: Lint-free absorbent toweling is recommended to avoid the release of tiny fibres, which could contaminate the genomic DNA and interfere with subsequent capillary electrophoresis.

20. Vacuum Oven Drying

Incubate HiPurA® 96-well DNA Plate (DBPL-96-01) for 15 minutes at 70°C in an incubator along with vacuum to evaporate residual ethanol.

21. DNA Elution

Remove the HiPurA® 96-well Block (1.6 ml) (LWB-16-96) which was used as collection tray from the vacuum manifold base and replace it with a new HiPurA® 96-well V-Block (DVB-96) for elution. Reassemble the manifold top and place the HiPurA® 96-well DNA Plate (DBPL-96-01) on to it. Add 200 µl of Elution Buffer (ET) to the corresponding wells of HiPurA® 96-well DNA Plate (DBPL-96-01) and incubate at room temperature for 5 minutes. Turn on the vacuum source and allow the vacuum to continue for 5 minutes.

NOTE: Make sure that the vacuum manifold gives a negative pressure of 30 inches Hg.

NOTE: The elution step can also be performed by adding 100µl Elution Buffer (ET) twice, instead of adding 200 µl of the buffer at a time.

22. Turn off the vacuum source and use the vacuum regulator to gradually release the vacuum from the manifold. Disassemble the manifold and remove the HiPurA® 96-well V-Block (DVB-96) which contains eluted genomic DNA samples.

Storage of the eluate with purified DNA: The eluate contains pure genomic DNA. For short-term storage (24-48 hours) of the DNA, 2-8°C is recommended. For long-term storage, -20°C or lower temperature (-80°C) is recommended. Avoid repeated freezing and thawing of the sample which may cause denaturing of DNA. The Elution Buffer (ET) will help to stabilize the DNA at these temperatures.

Centrifugation based Protocol:

This procedure requires the use of a high-speed centrifuge with a 96-well rotor and plate carriers.

1. To each well of HiPurA® 96-well Block (2.2 ml) (LWB-96) containing ground plant material (either by tissue lyser or bead beating method or by grinding), immediately add 400 µl of Lysis Buffer (PL) (DS0016) containing Additive-I (DS0054) (preheated to 95°C) using multi-channel pipette for easy solution delivery to each well.

NOTE: For the preparation of Lysis Buffer (PL), refer General Preparation Instructions.

2. Seal the HiPurA® 96-well Block (2.2 ml) (LWB-96) using the provided HiPurA® Silicon Pad for sealing (PR11) and mix vigorously by vortexing.
3. Incubate the mixture for 10 minutes at 95°C, mix the contents 2-3 times by vortexing the block gently.
4. Add 130 µl of Precipitation Buffer (PS) (DS0017) to the lysate in each well. Seal the block with HiPurA® Silicon pad for Sealing (PR11) and mix by gentle vortexing. Incubate for 5 minutes on ice.
5. Centrifuge the 96-well DNA Block (2.2 ml) along with the sample at 5,500 x g (6000 rpm) for 5 minutes.
6. **Load sample in HiPurA® 96-well HiShredder (DBH-96-01)**
Transfer the supernatant to the HiPurA® 96-well HiShredder (DBH-96-01) placed upon a new HiPurA® 96-well Block (1.6 ml) (LWB-16-96) and centrifuge for 5 minutes at 5,500 x g (≈6,000 rpm).
7. Transfer the flow-through fraction from step 6 to a new HiPurA® 96-well Block (1.6 ml) (LWB-16-96) without disturbing the cell debris pellet.
8. Add 20 µl of RNase A Solution (20 mg/ml) (DS0003) to the flow-through fraction in each well, mix and incubate at room temperature for 10 minutes.

9. **Binding**

(Prepare the Binding Buffer as indicated in General Preparation Instructions)

Add 1.5 volumes of Binding Buffer (BB) (DS0018) to the lysate obtained from the above step and mix by pipetting.

NOTE: E.g.: To 450 µl of lysate, add 675 µl of Binding Buffer (BB). The volume of buffer can be reduced accordingly if less lysate is obtained. A precipitate may form after the addition of Binding Buffer but this will not affect the DNA isolation procedure.

10. Load lysate in HiPurA® 96-well DNA Plate (DBPL-96-01)

Add 650 µl of the mixture from step 9, including any precipitate, which may have formed, to the HiPurA® 96-well DNA Plate (DBPL-96-01) placed upon a new HiPurA® 96-well Block (1.6 ml). Centrifuge for 5 minutes at 5,500 x g (6,000 rpm). Discard the flow-through and reuse the block.

11. Repeat step 10 with the remaining sample. Discard the flow-through liquid and reuse the block.

12. Wash

(Prepare the Wash Solution as indicated in General Preparation Instructions)

Add 500 µl of diluted Wash Solution (WSP) (DS0019) to each well of HiPurA® 96-well DNA Plate (DBPL-96-01) placed on the 1.6 ml block and centrifuge for 10 minutes at 5,500 x g (6,000 rpm).

NOTE: Discard the flow-through and reuse the block.

13. Add another 500 µl of the diluted Wash Solution (WSP) to each well of the HiPurA® 96-well DNA Plate (placed on the 1.6 ml block). Centrifuge for 10 minutes at 5,500 x g (6,000 rpm) and discard the flow-through and reuse the block.

14. Centrifuge the HiPurA® 96-well DNA Plate (placed on the 1.6 ml block) for an additional 10 minutes at 5,500 x g (6,000 rpm) to dry the membrane.

15. The HiPurA® 96-well DNA Plate can be incubated at 70°C for 15 minutes to remove the traces of ethanol present in the Wash Solution.

16. DNA Elution:

Place the HiPurA® 96-well DNA Plate on a new HiPurA® 96-well V-Block (DVB-96). Pipette 100 µl of the Elution Buffer (ET) (DS0040) directly into each well of HiPurA® 96-well DNA Plate. Incubate for 5 minutes at room temperature. Centrifuge at 5,500 x g (6,000 rpm) for 5 minutes to elute the DNA. Repeat the step again with another 100 µl of Elution Buffer (ET) for high yield of DNA.

NOTE: DNA elution can also be performed in single step by the addition of 200 µl of Elution Buffer (ET) at a time.

Storage of the eluate with purified DNA: The eluate contains pure genomic DNA. For short-term storage (24-48 hours) of the DNA, 2-8°C is recommended. For long-term storage, -20°C or lower temperature (-80°C) is recommended. Avoid repeated freezing and thawing of the sample which may cause denaturing of DNA. The Elution Buffer (ET) will help to stabilize the DNA at these temperatures.

Warning and Precautions

Not for Medicinal Use. Read the procedure carefully before beginning the protocol. Wear protective gloves/protective clothing/eye protection/face protection. Follow good laboratory practices while handling samples. Standard precautions should be followed as per established guidelines. Safety guidelines may be referred in safety data sheets of the product.

Performance and Evaluation

Each lot of HiMedia's HiPurA® 96 Plant Genomic DNA Purification Kit is tested against predetermined specifications to ensure consistent product quality.

Quality Control

Type of Sample	DNA Yield	DNA Purity
Plant leaf sample (100 mg)	1-15 µg of DNA	1.6-1.9

Troubleshooting guide

Sr. No.	Problem	Possible Cause	Solution
1.	Clogged HiPurA® 96-well DNA Plate	Carryover of the particulate material	Ensure that no particulate material is transferred through the HiPurA® 96-well HiShredder.
		Lysate is too viscous	The amount of starting material can be reduced or the amount of buffers PL and PS can be increased.
		Insufficient centrifugation	The g-force and the centrifugation time can be increased.
2.	Lower yields of DNA	Insufficient disruption of the plant tissue	Ensure that the plant material is disrupted in sufficient amounts of liquid nitrogen (if grinding using liquid nitrogen). It is very important that the disrupted tissue sample should not thaw before addition of Lysis Buffer.
		Insufficient lysis	The amount of the starting material can be reduced or the amount of buffers PL and PS can be increased.
		Improper binding	Ensure that the binding conditions are adjusted correctly by accurately determining the amount of lysate recovered.
3.	Shearing of DNA	Precipitation of Lysis Buffer (PL)	Examine the solution for any kind of precipitation; if the solution forms a precipitate, warm at 55-65°C until the precipitate dissolves completely, allow it to cool to room temperature (15–25°C) before use.
4.	Darkly colored membrane or green/yellow eluate after washing with wash solution	Insufficient washing of the membrane	After washing with the Wash Solution (WSP), an additional wash with 500 µl ethanol (96-100%) should be performed. Drying of the plate is important before elution.
		Amount of starting material is more than recommended	Reduce the amount of starting material for future preps.
5.	Poor performance of DNA in downstream experiments	Ethanol carryover	Ensure that after the second wash with Wash Solution (WSP), drying of the plate is done (as mentioned in the procedure). Also, the DNA plate should not come in contact with the flow-through liquid.
		Salt carryover	Ensure that the Wash Solution is at room temperature (15–25°C) before use.

Safety Information

The HiPurA® 96 Plant Genomic DNA Purification Kit is for laboratory use only, not for drug, household or other uses. Binding Buffer (BB) contains guanidine hydrochloride, which is harmful, and an irritant. Precipitation Buffer (PS) contains acetic acid, which is an irritant. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfecting agents containing bleach. Please refer the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed off in accordance with current laboratory techniques.

Technical Assistance

At HiMedia, we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance, send a mail to mb@himedialabs.com.

Please refer disclaimer Overleaf.



Storage temperature



Do not use if package is damaged



HiMedia Laboratories Private Limited,
Reg. Off: Plot No. C-40, Road No. 21Y,
MIDC, Wagle Industrial Area, Thane,
(West) 400604, Maharashtra, INDIA.
Web: www.himedialabs.com



02/2025

PIMB523_0/0222

MB523-12

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

HiMedia Laboratories Pvt. Ltd. Reg. office : Plot No. C-40, Road No. 21Y, MIDC, Wagle Industrial Area, Thane, (West) 400604, Maharashtra, INDIA.
Customer Care No.: 00-91-22-6116 9797 Tel: 00-91-22-6147 1919, 6903 4800 Email: techhelp@himedialabs.com Website: www.himedialabs.com