Plant direct 2x PCR master mix

Data Sheet

Version: 02/07.2024K

Product	Article Number	Size
Plant direct 2x PCR master mix Optimized PCR master mix for DNA amplifications directly from plants (tissue & seeds)	BS91.322.0250 BS91.322.1250	250 reactions x 20 µl 1250 reactions x 20 µl

Product Details

Shipping	RT or cooled
Storage	-20°C (long term) 2°C - 8°C (short term: stable for up to 4 weeks) Avoid frequent freezing/thawing.
Expiry date	See product label

General Information

Plant direct 2x PCR Mastermix is optimized for the amplification of target DNA directly from plant cells or seeds and does not require prior DNA purification. The ready-to-use Mastermix is 2-fold concentrated and contains all the reagents required for a polymerase chain reaction (PCR).

The combination of an antibody-blocked hot-start polymerase and an optimized buffer system enables high robustness, sensitivity and reproducibility.

Plant direct 2x PCR Mastermix enables quick and easy PCR preparation from plant cells, plant tissue and seeds.

Plant direct 2x PCR master mix contains:

Component	Concentration	BS91.322.0250	BS91.322.1250
Plant direct 2x PCR master mix	2x	2 x 1.25 ml	10 x 1.25 ml
Extraction Buffer	10x	2 x 1.5 ml	10 x 1.5 ml
PCR grade Water	-	15 ml	5 x 15 ml

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Notes

- Interference of remaining sample matrix components
  Our master mix enables a fast and easy PCR. Due to the relatively rough sample preparation components from the sample matrix may be transferred into the PCR assay as well. Through specially optimized additives in our buffer those matrix components are mainly blocked.

  If inhibition of the PCR reaction occurs with higher volumes of transferred sample volume, please reduce the sample volumes or use a dilution of the sample in 1x Extraction Buffer or water.

Instructions for use

Sample preparation

1. Remove the reagents from the refrigerator and allow them to thaw completely. Briefly vortex all reagents and centrifuge down the liquids.
2. Dilute the extraction buffer (10x) with water PCR grade to a 1x concentration.
3. **Tissue:** Prepare a small piece of plant tissue (diameter not larger than 8 mm)
   Seeds: Break plant seeds to a diameter of less than 1 mm using a BeadBeater, Tissue Lyser or small hammer.
4. Transfer the sample to a 1.5 ml tube and add 1x concentrated extraction buffer to your plant sample:

Sample size	1-2 mm	3-4 mm	5-8 mm
1x Extraction Buffer	50 µl	100 µl	200 µl

5. Mix the sample briefly (by tapping or vortexing).

   Important: The sample should be soaked in 1x extraction buffer so that all components come into contact with extraction buffer.

6. Incubate the sample for 3 minutes at RT.
7. Centrifuge briefly and transfer 1-2 µl of the supernatant into a 20 µl PCR assay (or 2-5 µl into a 50 µl PCR assay). See section “PCR Assay preparation”.

PCR Assay preparation

Prepare a master mix (except template DNA) according to the table below.

Note: Use sterile filter tips and perform the setup in an area separate from DNA preparation or analysis. Include no-template controls in all amplifications.

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Component	Stock Concentration	Final Concentration	20 µl Assay	50 µl Assay
Plant direct 2x PCR master mix	2x	1x	10 µl	25 µl
Extracted Sample	-	-	1-2 µl	2-5 µl
Forward Primer [1]	10 µM	300 nM	0.6 µl	1.5 µl
Reverse Primer [1]	10 µM	300 nM	0.6 µl	1.5 µl
PCR grade water	-	-	fill up to 20 µl	fill up to 50 µl

[1] The optimal concentration for primers may vary from 100 to 500 nM. Optimize for every new assay set-up.

Mix the tubes and spin down briefly to remove bubbles.

PCR cycling

Set the PCR cycler with all cycling parameters as recommended below:

Initial denaturation	95°C	2 min	1x
Denaturation **Annealing & Elongation**	95°C 60 - 65°C [2]	15 sec 30 - 60 sec [3]	 35 - 45x

[2] The annealing temperature depends on the specific primer melting temperature.
[3] The elongation time depends on the amplicon length. 30 sec are sufficient for fragments < 500 bp.

To obtain optimal specificity and amplification results adapts the parameters individually for each sample/primer pair.

Precautions and Disclaimer

This product is for research use only. This product should only be used by persons experienced in laboratory applications. Standard laboratory protective clothing such as gowns, gloves and goggles should be worn.

10x Extraction Buffer

Hazard pictograms: Corrosion

Signal word: Danger

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Hazard statements:

H314_Causes severe skin burns and eye damage.

Precautionary statements:

P260_Do not breathe dust/fume/gas/mist/vapours/spray.

P280_Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P303 + P361 + P353_IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water (or shower).

P305 + P351 + P338_IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310_Immediately call a POISON CENTER/doctor/...

P321_Specific treatment (see...on this label)

Do you have questions?

If you have any further questions about this product, please do not hesitate to contact us!
By e-mail: info@bio-sell.de or by phone: +49 (0) 9128 724 32 32.

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