

Materials List for:

Obtaining High-Quality Transcriptome Data from Cereal Seeds by a Modified Method for Gene Expression Profiling

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Materials

| Name | Company | Catalog Number | Comments |
|-----------------------------------|-----------------------------|----------------|--|
| β-mercaptoethanol | Roth | 4227.3 | Add 300 ul to 20 mL RNA Extraction Buffer immediately prior to use |
| Bioanalyzer 2100 | Agilent Technologies | | To determine quality and quantity of RNA extract |
| Crushed ice maker | Various brands | | To keep samples on ice during sample processing |
| Dewar flask | Various brands | | Used as liquid nitrogen container |
| Ethanol, absolute | Roth | 9065.1 | |
| Gene Expression Hybridization Kit | Agilent Technologies | 5188-5242 | Kit components: 2X Hi-RPM Hybridization Buffer 25X Fragmentation Buffer 10X Gene Expression Blocking Agent |
| Gene Expression Wash buffer Kit | Agilent Technologies | 5188-5325 | Kit components: Gene Expression Wash Buffer 1 Gene Expression Wash Buffer 2 Triton X-102 |
| Heat block | Various brands | | It is recommended to have at least one heat block for 1.5 ml tubes and another one for 2.0 ml tubes |
| Hybridization oven | Agilent | G2545A | Stainless-steel oven designed for microarray hybridization From Sheldon Manufacturing, used to hybridize the sample in microarray overnight. |
| Hybridization gasket slide kit | Agilent | G2534-60014 | |
| iQAir air cleaner | | | To ensure that the experiment is conducted in low-ozone area |
| Isopropanol | Roth | 9866.5 | |
| Lint-free paper, Kimwipes | Kimberly-Clark Professional | KC34155 | |
| Low Input Quick Amp Labeling Kit | Agilent Technologies | 5190-2305 | Kit components: T7 Primer 5x First Strand Buffer 0.1M DTT 10 mM dNTP Mix AffinityScript RNase Block Mix 5x Transcription Buffer NTP Mix T7 RNA Polymerase Blend Nuclease-free water Cyanine 3-CTP |

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|---|---|--------------------------|---|
| Metal spatula, small | | | Ensure that the small metal spatula can fit in the microfuge tubes to ensure easy scooping of samples. |
| Microarray scanner | Agilent Technologies | | Agilent SureScan or Agilent C microarray scanner are recommended |
| Microfuge tubes, nuclease-free | Various brands | | 2.0 mL and 1.5 mL volume |
| Microcentrifuge | Eppendorf | 5810 R | It is recommended to have at least one ambient and cold temperature microfuge with rotors that can hold 24 each of 1.5 ml and 2.0 ml microfuge tubes |
| Mini incubator | Labnet | I5110-230V | Any small incubator will do. |
| Mortar and pestle | | | Any small ceramic or marble mortar and pestle that can withstand cryogenic grinding using liquid nitrogen. |
| NaCl | Sigma-Aldrich | S7653-1KG | |
| Nanodrop 1000 | Peqlab / Thermofisher | | |
| Nuclease-free water | Biozym | 351900302 | |
| One-Color RNA Spike-In Kit | Agilent | 5188-5282 | Kit components: One color RNA Spike-Mix Dilution Buffer |
| Ozone barrier slide cover kit | Agilent | G2505-60550 | Optional but highly recommended |
| PCR tube, 0.2 mL, RNase-free | Stratagene | Z376426 | |
| Phenol:chloroform:isoamyl mixture (25:24:1) | Roth | A156.2 | |
| Pipette tips, nuclease free, filter tips | Various brands | | To accommodate 2, 20, 20, 100, 200 and 1000 ul volumes |
| Pipettor set | Various brands | | For 2, 20, 20, 100, 200 and 1000 ul volumes |
| RNA Extraction Buffer | 10 mM Tri-HCl pH 8.0 150 mM LiCl 50 mM EDTA 1.5% EDTA 15 ul/mL β -mercaptoethanol | | We routinely use Roth or Sigma chemicals; Add β -mercaptoethanol fresh daily |
| RNase-free DNase set | Qiagen | 79254 | |
| RNeasy Mini Kit | Qiagen | 74104 | Kit components: RNeasy mini spin column (pink) 1.5 ml collection tubes 2 ml collection tubes Buffer RLT Buffer RW Buffer RPE Nuclease-free water |
| RNeasy Plant Mini Kit | Qiagen | 74904 | Kit components: RNeasy mini spin column (pink) QIAshredder spin column (purple) 1.5 ml collection tubes 2 ml collection tubes Buffer RLT Buffer RLC Buffer RW1 Buffer RPE Nuclease-free water |
| Slide holders for DNA microarray scanner | Agilent | G2505-60525 | |
| Slide staining dish with removable rack | DWK Life Sciences 900200 | Fisher Scientific 08-812 | We recommend DWK Life Sciences Wheaton™ Glass |

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|------------------------------|----------------|--------|--|
| | | | 20-Slide Staining Dish with Removable Rack (Complete with dish, cover, and glass slide rack) |
| Sodium chloride | Roth | P029.1 | |
| Ultralow temperature freezer | Various brand | | Capable of storing sample at -80 °C |
| Vortex mixer | Various brands | | At least one for single tube vortex-mixer and another one for that can vortex-mix multiple tubes |