

Custom Master Mixes: Delivering Exactly What You Need

Promega Corporation



Challenge: Finding a manufacturer that can reliably provide high-quality PCR master mixes with the formulation and at the volume required to meet your growing needs.

Solution: Promega offers customized options for a wide range of master mixes. We can partner with you to develop a master mix to meet your specific needs.

Benefits:

- Quality assurance
- Flexible manufacturing capacity scalable to your needs
- Customizable formulation, storage and packaging
- Global distribution and delivery options

Custom options range from simple changes in dispensed size to unique master mixes created specifically for your needs.

Simplified Workflow with Amplification Master Mixes

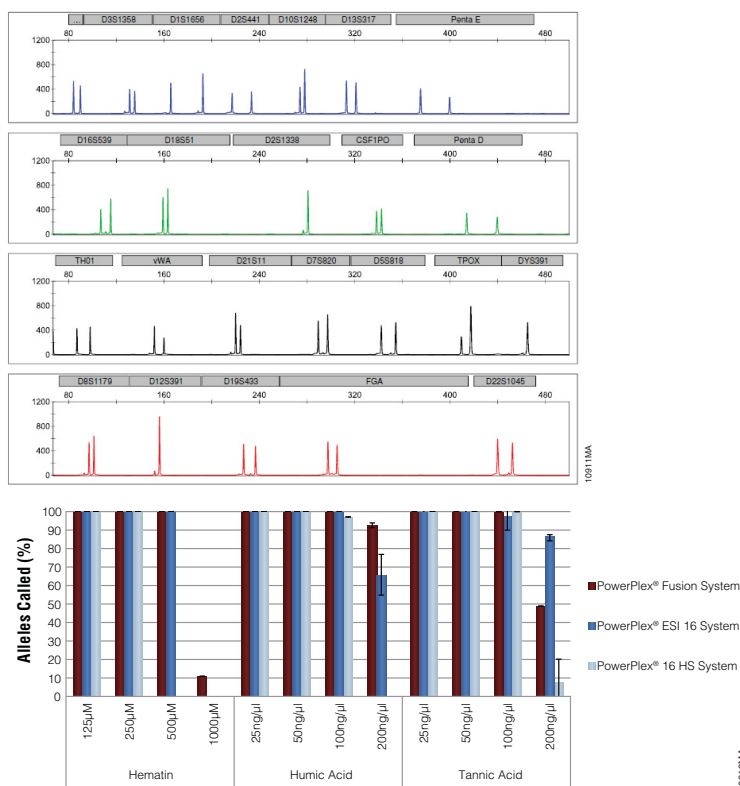
Get reliable results while simplifying your work. Amplification master mixes reduce your assay setup by combining the amplification components. Promega manufactures and quality control tests all amplification components prior to master mix formulation under a certified quality system. You can be assured of consistent performance and results.

Proven Capabilities

Promega is a global leader in the life sciences industry, with a portfolio of over 2,500 products and a 30-year track record of supplying high-quality reagents. Promega is the primary manufacturer of the enzymes, dNTPs and buffers used in master mixes. Our broad scientific expertise in both the design and manufacture of amplification components and master mixes assures delivery of a consistent and robust custom master mix specific for your application.

Multiplex PCR Master Mixes

As a leader in Genetic Identity, Promega has proven experience in the design and development of complex multiplex amplification master mixes.

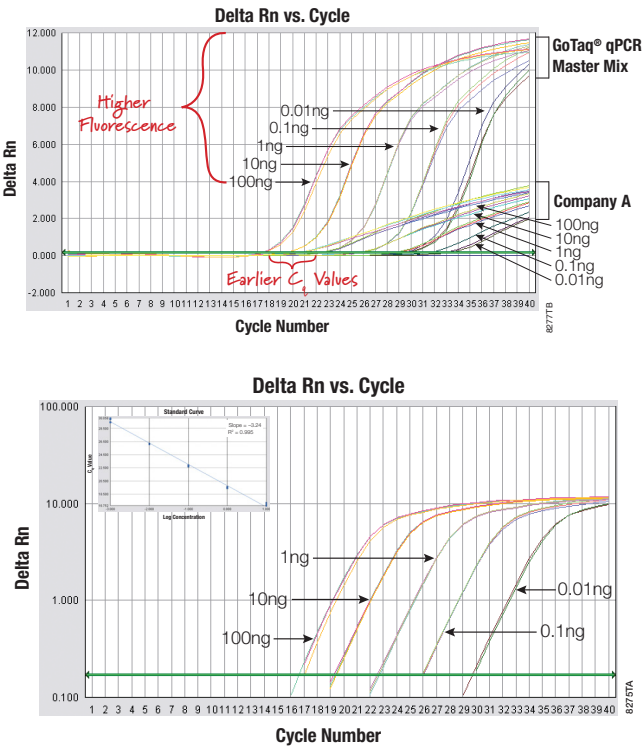


Robust multiplex PCR master mix formulations that can reproducibly amplify multiple targets from challenging samples in a single 90-minute multiplex reaction. Top panel. An example of multiplex amplification of 24 short tandem repeat loci. Bottom panel. An example of successful multiplex amplification in the presence of increasing concentrations of PCR inhibitors.



Dye-based qPCR Master Mixes

Promega offers robust real-time PCR master mixes with sensitive and reliable performance. These master mixes are compatible with both fast and standard thermal cycling for qPCR and one-step or two-step RT-PCR options.

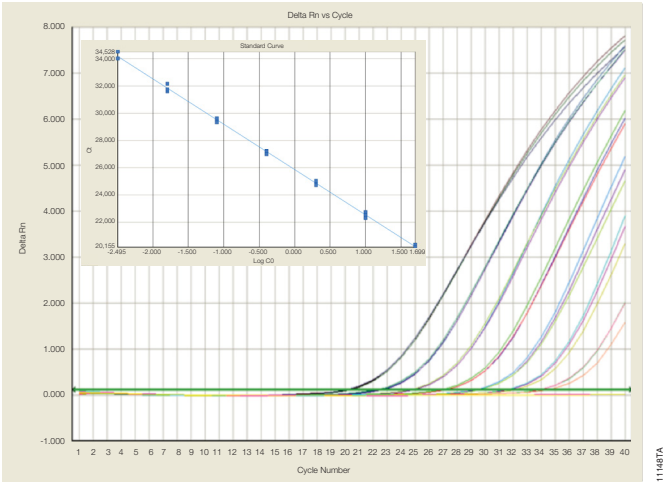


Amplification results generated using the GoTaq[®] qPCR Master Mix for dye-based detection.

Capitalize on Promega amplification technology and experience: Customize an amplification master mix formulation specific to your needs.

Probe-based qPCR Master Mixes

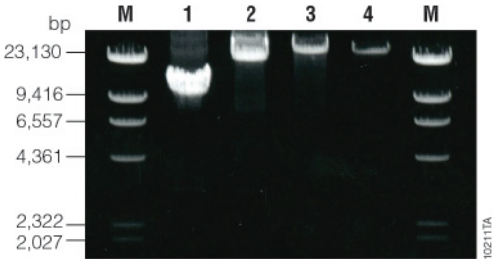
Promega also offers flexible master mixes that are optimized for probe-hydrolysis quantitative PCR, resistant to PCR inhibitors and compatible with both fast and standard thermal cycling methods. These master mixes provide sensitive quantitation on any real-time PCR instrument and have customizable formulations for qPCR and one-step or two-step RT-PCR options.



Amplification of the human insulin gene from pancreas total RNA using the GoTaq[®] Probe RT-qPCR Systems.

Long PCR Master Mixes

The high-performance mixture of GoTaq[®] Hot Start Polymerase and a proprietary thermostable proofreading polymerase enables the amplification of long amplicons.



Amplification of long amplicons using the GoTaq[®] Long PCR Master Mix. Lane 1. A 10kb DNA target. Lane 2. A 20kb DNA target. Lane 3. A 30kb DNA target. Lane 4. A 40kb DNA target. Lane M. Lambda DNA/HindIII Markers (Cat.# G1711).

Scientific Expertise to Meet Your Unique Needs

The wide-ranging expertise of Promega scientists is made available to our partners to design, optimize and manufacture custom master mixes according to your specifications to meet your needs. We offer personal service to ensure that our experts are accessible to support you. To help accelerate your assay development, we can provide:

- Prototype master mix formulations to help you determine the optimal final master mix formulation for your assay
- Lyophilization-ready enzyme and master mix formulations.
- Technical expertise and subject matter experts to assist with design decisions and provide advice based on previous manufacturing experience
- Team members with expertise in project management, resource planning, materials, quality assurance and logistics

It is our mission to support the innovation of our partners.

Manufacturing: Built on Flexibility, Based on Quality

Flexibility

With manufacturing facilities across the US, in China and in South Korea and the recent construction of a 260,000-square-foot center for manufacturing products under cGMP (current Good Manufacturing Practices), Promega has made dedicated investments in developing and maintaining state-of-the-art, high-quality manufacturing facilities. We are committed to excellence in manufacturing, compliance to the highest quality standards and expansion to meet your growing needs. Promega capabilities include:

- Flexible manufacturing and dispensing lines
- Manufacturing within environmentally controlled spaces
- Separation of pre- and post-amplification processes
- Formulation and dispensing to requested volume specifications including semi-automated filling for low-volume units
- Automated packaging of ambient kits
- State-of-the-art bioprocessing facilities
- Packaging options to suit your specifications

Promega manufacturing expertise covers techniques relevant to the life sciences industry, including protein engineering, nucleic acid purification and amplification, and cell biology. We have the flexibility and capacity to manufacture a range of batch sizes and experience in perfecting the techniques required to ensure consistency in product quality batch after batch and time after time.

Quality

Promega was first certified to international standards for quality management systems in 1998, and that commitment continues today. To achieve ISO certification, an organization must demonstrate to a third party that the organization meets all requirements of the standard and has implemented a quality system capable of developing, manufacturing, testing and delivering high-quality products. ISO certification exemplifies Promega's commitment to our clients, our business and all those who rely on and benefit from the use of our products. The Promega Madison, USA, facility maintains certification to ISO 9001 and ISO 13485 standards. Currently 15 Promega facilities around the world are certified to ISO standards. You can have confidence in our ability to manufacture products and assay components reproducibly and to provide the required quality documentation. These requirements include:

- Detailed manufacture and QC documentation
- Production and process controls
- Product Certificates of Analysis
- Traceable product batch records
- Product stability programs
- Product change control and notification procedures
- Supplier evaluation and qualification program
- Equipment maintenance and calibration program
- Change control procedures
- Nonconforming product procedures
- Design control

Summary

Accelerate your work to deliver a reliable and robust assay. Choose Promega as your experienced partner to design and develop an amplification master mix to meet your specific needs.

