

# Q800R3

DNA Shearing Sonicator

QSONICA

- **High throughput**
- **Uses standard sample tubes**
- **2 year warranty**



## APPLICATIONS:

- **DNA shearing for Next-gen sequencing**
- **Chromatin shearing**
- **ChIP**
- **ChIP-seq**
- **RNA-seq**
- **Protein extraction**
- **Cell lysis**

## KEY INSTALLATIONS:

- **Broad Institute**
- **NIH**
- **Harvard Medical School**
- **Broad Institute**
- **Memorial Sloan Kettering**
- **Max Planck Institute**
- **Ludwig Institute UCSD**
- **University of Cambridge**
- **Washington Univ. St. Louis**
- **California Institute of Technology**
- **Shanghai Inst. for Biological Sciences**

Qsonica has over 45 years of experience manufacturing ultrasonic equipment with thousands of customers around the world. All products are designed and manufactured in the USA and include a full 2-year warranty.

The Q800R3 is our 2nd generation DNA and Chromatin shearing system. Improvements include an enhanced user-friendly design and quieter operation while remaining thousands of dollars less than the competition.

Samples can be sheared to a range of fragment sizes (150bp – 3kb). The system is compatible with commercially available sample tubes and is capable of processing up to 18 samples at one time. Multiple tube rack options can accommodate 50ul - 1ml sample volumes using a variety of standard sample tubes.

The Q800R3 is a complete package including a chiller to control temperature, digital operating system with programmable memory, high intensity ultrasonics and sound reducing enclosure.

# Chromatin Shearing

Example protocols and results are based on customer feedback.

## Sample Protocols:

### Mammalian Chromatin

**Cell Type:** HEK 293T (2) 10cm dishes  
70-80% confluent

**Total Sample Volume:** 300ul

**Fixation Time:** 1% Formaldehyde, 13 min

**Sonicator Amplitude Setting:** 70%

**Sonication Pulse Rate:** 15 seconds On,  
45 seconds Off

**Total Sonication On Time:** 30 min

### Yeast Chromatin

**Cell Type:** Wild type *S. pombe* cells  
grown to an OD of 1.3-1.5 in YEA.

**Total Sample Volume:** 300ul

**Fixation Time:** 1% Formaldehyde, 15 min

**Sonicator Amplitude Setting:** 100%

**Sonication Pulse Rate:** 20 seconds On,  
40 seconds Off

**Total Sonication On Time:** 30 min

### *C. elegans* Chromatin

**Cell Type:** *C. elegans* culture;  
Nuclear extract 1mg/ml

**Total Sample Volume:** 500ul

**Fixation Time:** 2% Formaldehyde, 20 min

**Sonicator Amplitude Setting:** 70%

**Sonication Pulse Rate:** 30 seconds On,  
30 seconds Off

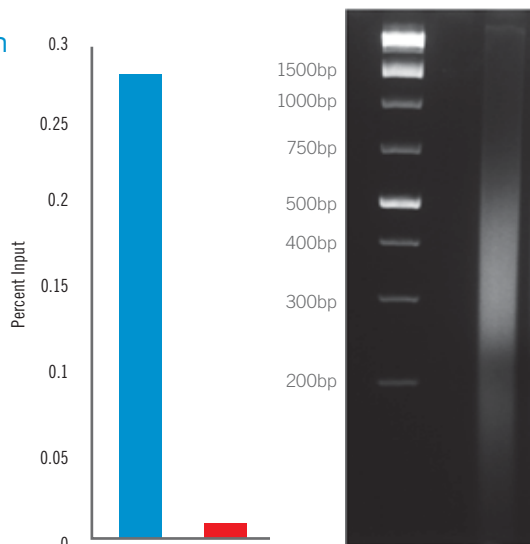
**Total Sonication On Time:** 20 min

## Sample Results:

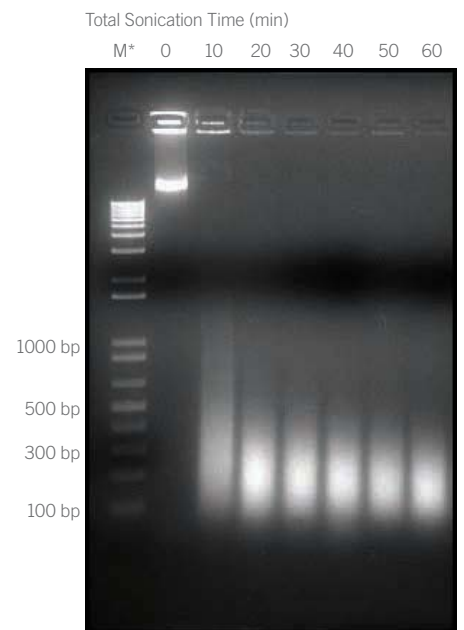
### *C. elegans* Chromatin Prep & Chip

500 ul Nuclear Extract,  
10ul Pol II Ab (8WG16)

■ Protein-Coding Gene  
■ Ribosomal RNA Gene

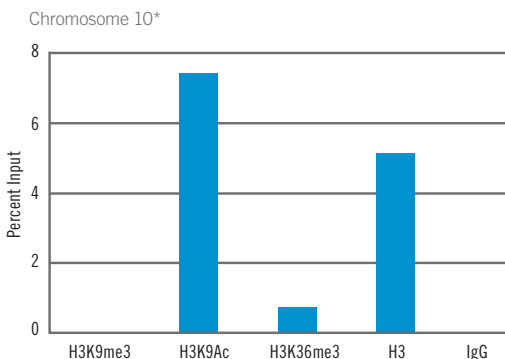


### Yeast Chromatin Prep & Chip



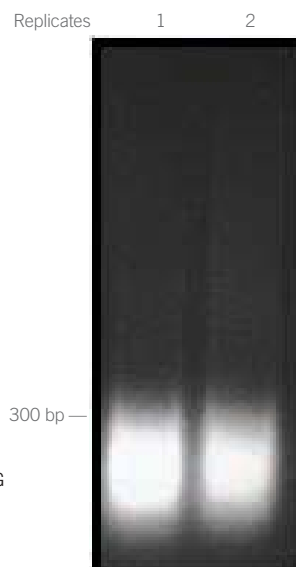
\* Note: Lane M is the NEB 1kb Plus ladder

### Mammalian Chromatin Prep & Chip



Chr10 Primer sequences: Forward - TCCTTCTCCCAACAATCAGCReverse - GATGTCGCTCCGAATCTTG  
Antibodies Used: H3K9me3 (abcamab8898), H3K9Ac (upstate 07-352), H3K36me3(abcam  
ab9050), H3 (abccamab1791)

\* Average of two independent replicate chromatins in pane



Sample protocols  
and publications for  
additional species and  
cell lines are available in  
the literature section  
of [www.sonicator.com](http://www.sonicator.com)

[www.sonicator.com/dna](http://www.sonicator.com/dna)

# DNA Shearing

Example protocols and results are based on customer feedback.

## Sample Protocols:

### Bacterial Genomic DNA

**Cell Type / Concentration:** *E.coli* / 250ng

**Sonication Pulse Rate:** 15 seconds On, 15 seconds Off

**Total Sample Volume:** 200ul in 0.5ml tubes

**Total Sonication On Time:** As indicated below

**Sonicator Amplitude Setting:** 20%

### Human Skeletal Myoblast Genomic DNA

**Cell Type / Concentration:** LHCN-M2 Skeletal Myoblast / 200ng

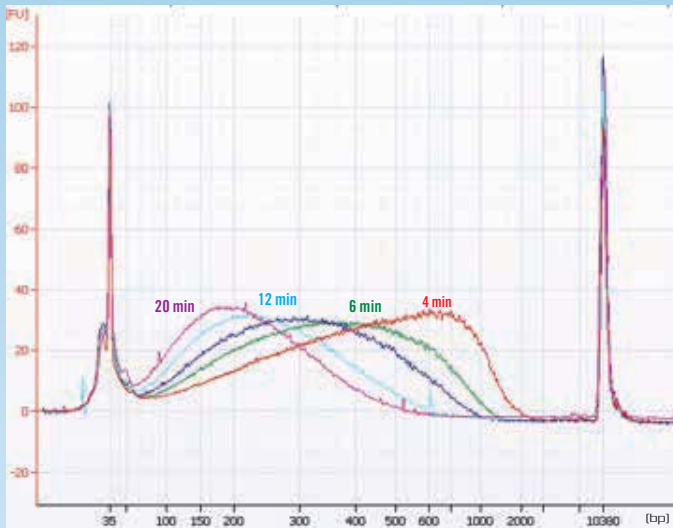
**Sonication Pulse Rate:** 15 seconds On, 15 seconds Off

**Total Sample Volume:** 200ul in 0.5ml tubes

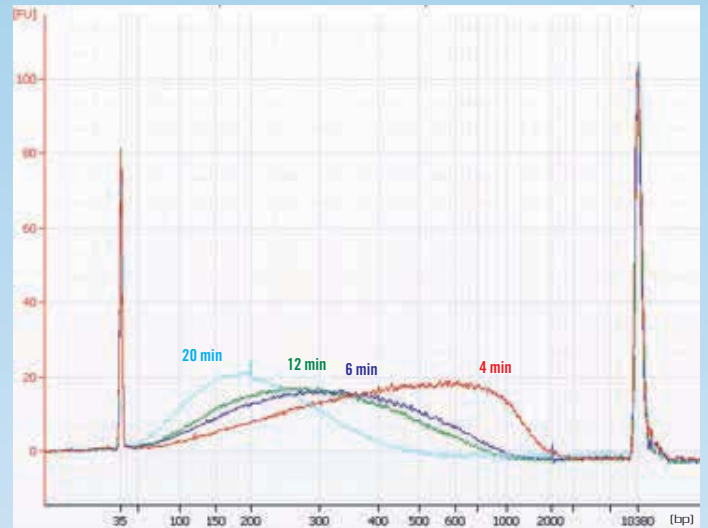
**Total Sonication On Time:** As indicated below

**Sonicator Amplitude Setting:** 20%

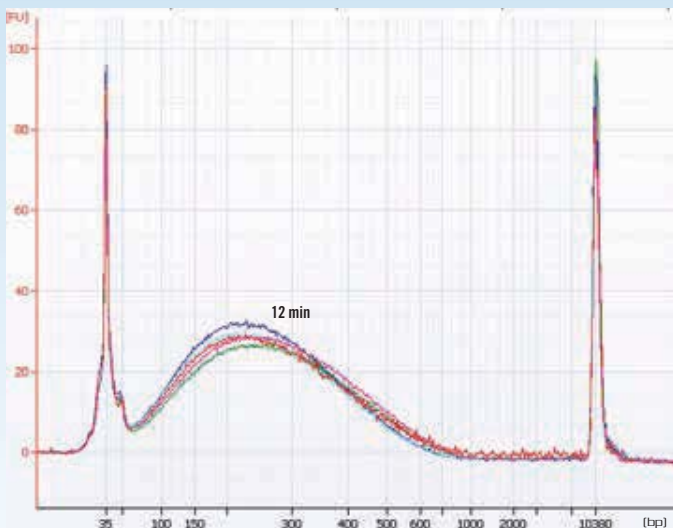
Fragmentation Over Time



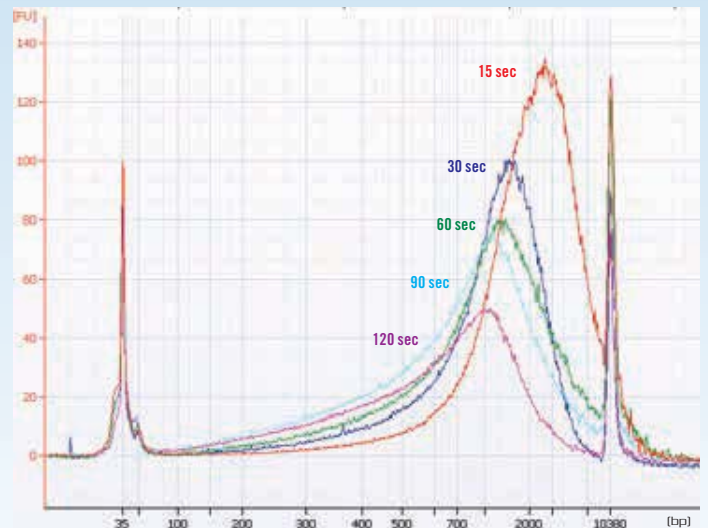
Fragmentation Over Time



Testing Independent Replicates



Fragmentation Over Time





Digital operating system with programmable memory



Completely integrated system includes a Chiller to control processing temperatures



ULTRASONIC START/STOP  
 PROCESSING TIMER  
 PULSE/REST  
 AMPLITUDE  
 POWER ON/OFF  
 PAUSE  
 DEGAS

Rotating sample tube holder with internal lighting

### Sample Tube Rack Options for the Q800R3 System

**#4256**  
 8 tube holder  
 (1.5mL Polystyrene tubes)



**#4255**  
 12 tube holder  
 (0.5mL PCR tubes)



**#4262**  
 18 tube holder  
 (0.3mL PCR tubes)



### Technical Specifications:

**Power Rating:** 750 Watts  
**Frequency:** 20 kHz  
**Programmable Timer:** 1 second to 10 hours  
**Voltage:** 110V\*, 50/60Hz

*\*Specify desired voltage for export*

### Dimensions:

Generator 8.00" W x 15.25" L x 8.50" H  
 Enclosure 11.50" W x 12.00" L x 20.00" H  
 Chiller 11.00" W x 13.00" L x 13.00" H

### Additional information on our website:

- Sample Protocols
- Optimization tips
- Video
- Customer Feedback
- Recent Publications

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