



**BILLING RATES - FY 10/11**

**DEPARTMENT NAME :**  
**The National Brick Research Center**

**VICE-PRESIDENT AREA :**  
**Academic Affairs**

DESCRIPTION OF COMMODITY OR SERVICE :	UNIT OF BILLING	FY 10/11 MEMBER RATE	FY 10/11 NON-MEMBER RATE	CUSTOMERS BEING SERVED
<b>Use of The Bishop Ceramic Research Facility for Product Testing by an Industrial Client with Center Staff Control</b>	daily rate	\$330.00	\$824.00	Brick & Tile Industry
<b><u>ASTM C-67 Brick</u></b>				
Modulus of Rupture	5 bricks	\$46.00	\$92.00	Brick Industry
Breaking Load	5 bricks	\$46.00	\$92.00	Brick Industry
Compressive Strength	5 bricks	\$60.00	\$120.00	Brick Industry
Absorptions	5 bricks	\$53.00	\$106.00	Brick Industry
Freeze/Thaw	5 bricks	\$286.00	\$572.00	Brick Industry
Initial Rate of Absorption (IRA)	5 bricks	\$20.00	\$40.00	Brick Industry
Efflorescence	10 bricks	\$47.00	\$94.00	Brick Industry
Void Area	10 bricks	\$18.00	\$36.00	Brick Industry
Dimensions & Distortion	10 bricks	\$27.50	\$55.00	Brick Industry
<b><u>ASTM C216/C652</u></b>				
Compliance Tests ( Absorptions, Compressive Strength, IRA & Efflorescence)	15 brick	\$198.00	\$396.00	Brick Industry
Compliance Tests in excess of 200 sets per year	15 bricks	\$105.00	N/A	Brick Industry
<b><u>ASTM C-902 Brick</u></b>				
Abrasion Index (Calculated)		\$20.00	\$40.00	Brick Industry



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<b><u>ASTM C-1072* Brick</u></b>				
Bond Wrench	7 bricks	\$233.00	\$466.00	Brick Industry
<b><u>ASTM C-1314 Brick</u></b>				
Compressive Strength	5 bricks	\$60.00	\$120.00	Brick Industry
<b><u>ASTM C-1405 Glazed Brick</u></b>				
Properties of Glaze	5 bricks	\$100.00	\$200.00	Brick Industry
<b><u>ASTM E-514 Brick</u></b>				
Water Penetration plus masonry cost	600 bricks special mortar	\$800.00	\$1,600.00	Brick Industry
<b><u>ASTM E-518* Brick</u></b>				
Flexural Bond Strength	70 bricks	\$233.00	\$466.00	Brick Industry
<b><u>ASTM C-279/C-980 Chemical Resistant Brick</u></b>				
Chemical Resistance	5 bricks	\$200.00	\$400.00	Brick Industry
<b>ASTM E303 Skid Resistance</b>	5 bricks	\$135.00	\$215.00	Brick Industry
<b><u>Product Certification Fee</u></b>				
Certification		\$3,000.00	\$6,000.00	Brick Industry
Actual Testing				
Actual Travel				



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<b><u>Product Certification Renewal Fee</u></b>				
Renewal Fee (Year 2 and 3)		\$1,000.00	\$2,000.00	Brick Industry
Actual Testing Cost				
Actual Travel Cost				
<b><u>ASTM C-55 Concrete Brick</u></b>				
Concrete Building Brick	9 Units	\$275.00	\$550.00	Concrete
Compression, Absorption, Unit Weight, Dimensional Tolerance, & Shrinkage				
<b><u>ASTM C-90 Concrete Masonry Units</u></b>				
Loadbearing Concrete Masonry Units	9 Units	\$275.00	\$550.00	Concrete
Compression, Absorption, Unit Weight, Dimensional Tolerance, & shrinkage Dimensional Tolerance & Shrinkage				
<b><u>ASTM C-140 Concrete Masonry Units</u></b>				
Compression , Absorption, Unit Weight, Dimensional Tolerance & Shrinkage	6 CMU's	\$125.00	\$250.00	Concrete
	6 SRW's	\$175.00	\$350.00	Concrete
	6 Pavers	\$125.00	\$250.00	Concrete
<b><u>ASTM C-140 Concrete Masonry Units</u></b>				
Compressive Strength	3 CMU's	\$55.00	\$110.00	Concrete
	3 SRW's	\$60.00	\$120.00	Concrete



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	3 Pavers	\$48.00	\$96.00	Concrete
Absorption, Unit Weight	3 CMU's	\$55.00	\$110.00	Concrete
	3 SRW's	\$60.00	\$120.00	Concrete
	3 Pavers	\$48.00	\$96.00	Concrete
Dimensional Tolerance	3 CMU's	\$48.00	\$96.00	Concrete
	3 SRW's	\$48.00	\$96.00	Concrete
	3 Pavers	\$48.00	\$96.00	Concrete
<b><u>ASTM C-426 Concrete Masonry Units</u></b>				
Drying Shrinkage	3 Units	\$200.00	\$400.00	Concrete
<b><u>ASTM C-1634 Concrete Masonry Units</u></b>				
Concrete Facing Brick	9 Units	\$275.00	\$550.00	Concrete
Compression, Absorption, Unit Weight, Dimensional Tolerance, & Shrinkage				
<b><u>Dimension Stone</u></b>				
<b>ASTM C-97 Absorption</b>	5 Units	\$90.00	\$142.50	Stone
<b>ASTM C-99 MOR</b>	20 Units	\$180.00	\$285.00	Stone
<b>ASTM C-170 Compressive Strength</b>	20 Units	\$345.00	\$546.00	Stone
<b>ASTM C-482 Bond Strength</b>	5 Units	\$138.00	\$218.00	Stone



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ASTM C-880 Flexural Strength	20 Units	\$180.00	\$285.00	Stone
<b><u>Analytical Testing</u></b>				
Dilatometry (Air)	1 brick	\$75.00	\$140.00	Brick Industry
Dilatometry (Cryogenic)	per sample	\$150.00	\$300.00	Brick Industry
Crystalline Silica Analysis	minimum of 10 grams	\$126.00	\$252.00	Brick Industry
Mercury Porosimetry	1 brick or 100grams of	\$170.00	\$340.00	Brick Industry
Hydrogen Fluoride Analysis (Dried Brick) Pyrohydrolysis Method	1 dried brick or 500g of raw material	\$114.00	\$228.00	Brick Industry
Hydrogen Fluoride & Hydrogen Chloride Analysis (Dried Brick) Pyrohydrolysis Method	1 dried brick or 500g of raw material	\$171.00	\$342.00	Brick Industry
Mass Balance (Fluorides)	1 dried brick and 1 fired	\$254.00	\$508.00	Brick Industry
Mass Balance ( Fluorides & Chlorides)	1 dried brick and 1 fired	\$311.00	\$622.00	Brick Industry
Total Sulfur and Carbon (LECO)	50 gram sample	\$70.00	\$140.00	Brick Industry
Mass Balance for Sulfur & Carbon (LECO)	50 gram sample	\$126.00	\$252.00	Brick Industry
<b><u>ASTM-E1915 Brick</u></b>				
"Pyrite, Sulfate & Inorganic Carbon Determination by Pyrohydrolysis" (LECO)	50 gram sample	\$152.00	\$304.00	Brick Industry
Thermogravimetric Analysis & Differential Scanning Calorimetry (STA)	10 gram sample	\$252.00	\$504.00	Brick Industry
STA+FTIR (Netzsch)	per sample	\$341.00	\$682.00	Brick Industry
Thermogravimetric Analysis (TG)	10 gram sample	\$126.00	\$252.00	Brick Industry
TG+FTIR (Netzsch)	per sample	\$215.00	\$430.00	Brick Industry
Scanning Electron Microscopy: plus consumables	per hour	\$192.00	\$384.00	Brick Industry



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SEM Image Analysis: plus consumables	per sample	\$120.00	\$240.00	Brick Industry
X-Ray Diffraction, Phase Identification	20 gram sample	\$140.00	\$255.00	Brick Industry
X-Ray Diffraction, Phase Quantification	per sample	\$175.00	\$330.00	Brick Industry
X-Ray Diffraction (Bulk)	Per Hour	\$55.00	\$110.00	Academic Dept.
Total Particle Size Analysis-by Sedimentation	1000 gram sample	\$65.00	\$130.00	Brick Industry
Total Particle Size Analysis-by Sedigraph	1000 gram sample	\$100.00	\$200.00	Brick industry
Soluble Salts Test (Cations/Anions)	per sample	\$150.00	\$300.00	Brick industry
Firing Test (<2350 F) Small Oven	per sample	\$250.00	\$500.00	Brick Industry
Firing Test (<2350 F) Large Oven	per sample	\$300.00	\$600.00	Brick Industry
Loss on Ignition (LOI)	200 grams of dry material	\$33.00	\$66.00	Brick Industry
Gradient Testing (Sample Preparation Extra)	per sample	\$75.00	\$150.00	Brick Industry
Firing and Property Testing (Sample Preparation Extra)	per sample	\$700.00	\$1,400.00	Brick Industry
XRF (X-ray Florescence Spectrometer)	per sample	\$110.00	\$220.00	Brick Industry
XRF (X-ray Florescence Spectrometer) - Salt Fusion	per sample	\$175.00	\$315.00	Brick Industry
BET Surface Area Analysis	per sample	\$125.00	\$250.00	Brick Industry
Drying Test (with Lingl Dryer)	per sample	\$150.00	\$300.00	Brick Industry
Inductively Coupled Plasma Spectroscopy	per sample	\$50.00	\$75.00	Brick Industry
Inductively Coupled Plasma Spectroscopy with Acid Digestion	per sample	\$100.00	\$200.00	Brick Industry
<b><u>ASTM C-20 Ceramic</u></b>				
Porosity, Absorption, Specific Gravity, Bulk Density	5 Units	\$66.00	\$132.00	Brick Industry



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<b><u>ASTM C-113 Refractory</u></b>				
Reheat Change (2730F Limit)	3 Units	\$273.00	\$546.00	Brick Industry
<b><u>ASTM C-133 Refractory</u></b>				
Cold Crushing & MOR	5 Units	\$106.00	\$212.00	Brick Industry
<b><u>ASTM C-126 Clay Tile</u></b>				
Compressive Strength	5 Units	\$60.00	\$120.00	Brick Industry
<b><u>ASTM C-370 Whiteware</u></b>				
Moisture Expansion	5 Units	\$130.00	\$260.00	Brick Industry
<b>Special Advising Related to Plant and Service Problems.(\$200 per hour plus actual travel cost)</b>	Per Hour	\$200.00	N/A	Brick Industry
<b>Special Projects for Members</b>	Center Director's Approval	actual cost +	actual cost +	All Industries
<b>Material Storage</b>	sq. ft./month	\$8.00	\$12.00	All Industries
<b>Surcharge for Fax Report</b>	per report	\$10.00	\$20.00	All Industries
<b>Duplicate Reports</b>	per report	\$10.00	\$10.00	All Industries
<b>Multiple Reports for any one test</b>	per report	\$20.00	\$40.00	All Industries



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<b>(includes mailing and CD by US Mail)</b>				
<b>Shipping and Handling</b>	actual cost + process fee	actual cost + \$8.00	actual cost + \$16.00	All Industries
<b>Outside Testing Laboratory Reports</b> <b>(any laboratory outside of NBRC)</b>	Per report	10% of cost	10% of cost	All Industries
<b>Local Delivery of Testing Specimens</b>	per specimens	\$20.00	\$40.00	All Industries
<b>Energy Surcharge</b>	Cost	actual cost	actual cost	
<b>Disposal Fee</b>	Per Test			
<b>1-25 Units or Bricks</b>		\$1.00	\$2.00	All Industries
<b>26-100 Units or Bricks</b>		\$0.50	\$1.00	
<b>Above 100 Units or Bricks</b>		\$0.25	\$0.50	