



**PRODUCT PERFORMANCE TESTING LABORATORY**

100 Clemson Research Blvd., Anderson, SC 29625

Phone 864.646.8453 Fax 864.646.2821

Email [testing@tcnatile.com](mailto:testing@tcnatile.com) Web [www.TCNAtile.com](http://www.TCNAtile.com)

---

March 14, 2021

Ceramica San Lorenzo – Lamosa

Attn:

Av. Industrial S/N San Pedro – Lurin Plantal

Lima, Peru – Lima 16

Dear Mr.

Tile Council of North America has tested the samples you submitted. Test report TCNA-0925-20 Influenza A virus (H1N1) is enclosed. If you have any questions or concerns, please contact us.

Best Regards,

TILE COUNCIL OF NORTH AMERICA, INC.

Dr. Jyothi Rangineni

Research Scientist

Enclosures



---

**TCNA TEST REPORT NUMBER:** TCNA-0925-20 **PAGE:** 1 OF 3

**TEST REQUESTED BY:** Ceramica San Lorenzo – Lamosa  
Av. Industrial S/N San Pedro – Lurin Plantal  
Lima, Peru – Lima 16

**TEST SUBJECT MATERIAL:** Identified by client as: “**MADERA TRATADA**”

**TEST DATE:** 2/1/2021 - 3/14/2021

**TEST PROCEDURE:**

*ISO 21702:2019 Measurement of antiviral activity on plastics and other non-porous surfaces.* Test method was modified to test with viruses – Influenza A virus (H1N1)

**TEST CONDITIONS:**

Test sample size: 50 mm x 50 mm  
Sterilization of samples: UV sterilization for 15 minutes  
Test viruses and cell lines:

Virus	Cell line
Influenza A virus (H1N1) (ATCC® VR-1469)	MDCK (NBL-2) (ATCC CCL-34)

Volume of test suspension applied on test sample: 0.4 mL  
Infectivity titer of virus:  $10^6$  TCID<sub>50</sub>/mL  
Environmental conditions for contact time: Temperature at 25°C ± 1  
RH ≥ 90%



**TCNA TEST REPORT NUMBER:**

**TCNA-0925-20**

**PAGE: 2 OF 3**

**Test Results:** Results of testing performed on **MADERA TRATADA** with Human Coronavirus 229E

Sample	Virus	Cell line	Infectivity titer TCID50/mL	Contact time	Percentage Reduction (%)*
Sample 1	Influenza A virus (H1N1)	MDCK	TCID 10 <sup>6</sup> /mL	24 hr	99.9%
Sample 2					99.9%
Sample 3					99.9%

\*Percentage reduction calculated per infectivity titer recovered from the glass samples after 24 hours of contact time with virus



**TCNA TEST REPORT NUMBER: TCNA-0925-20**  
**DISCLAIMER AND LIMITATION OF LIABILITY**

**PAGE: 3 OF 3**

This report is provided for the sole use of the client and no one else. It is intended for professional use by a knowledgeable professional. If published by the client, it must be published in full, including this disclaimer and limitation of liability.

This report is not an endorsement, recommendation, approval, certification, or criticism by TCNA of any particular product or its application. TCNA recommends that anyone considering the use or installation of a particular product consult with the manufacturer or an industry professional for advice specific to the person's needs and consider any applicable laws, statutes, codes, or regulations relevant to the particular product. TCNA does not know all the different manners and applications in which a client's particular product might be used, and, therefore, it disclaims any and all duty to provide warnings or to further investigate the suitability of the use of a particular product in a particular situation.

Unless otherwise expressly stated, TCNA tested the specific test subject material provided by the client and identified in the lab report, as indicated by the client. TCNA does not independently verify the information provided by the client, and it makes no representation that similar results would be achieved with other, untested materials, even if such other materials purportedly have the same product name, are purportedly of the same or similar type of tile or product made by the client, or are purportedly from the same batch of tile or product. Nor does TCNA state that the date in this report is representative of production occurring at the same time or at any other time. Only the manufacturer may make that claim, based on sampling and quality control parameters beyond the knowledge and control of TCNA. TCNA does not provide any supervision, review, management, or quality control of any manufacturer's production.

TCNA makes no representation that the client's products are uniform or identical to the test subject material, that the test subject material is suitable for any particular use, application, or installation, or that it will exhibit the same properties when installed or used in a particular manner. The data provided in this report results from standardized laboratory testing performed under laboratory conditions. As such it does not represent all conditions under which the products may be used or subjected. For testing on actual materials being used or considered for a job site, contact TCNA for sampling provisions and possible testing.

This report is intended solely to provide the results of the test procedure stated above as performed on the test subject material provided by the client, and may not be relied on for any other purpose. TCNA MAKES NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY DISCLAIMED. IN THE EVENT OF A DISPUTE CONCERNING THIS REPORT, THE EXCLUSIVE REMEDY FOR CLIENT SHALL BE FOR TCNA TO REPEAT THE TEST REQUESTED, BUT IN NO EVENT SHALL TCNA BE LIABLE FOR AN AMOUNT GREATER THAN THE AMOUNT IT RECEIVED FROM CLIENT FOR THE TEST. UNDER NO CIRCUMSTANCES WILL TCNA BE LIABLE TO CLIENT FOR ANY OTHER DAMAGES (NOR SHALL IT BE LIABLE TO ANY OTHER PERSON OR BUSINESS ENTITY FOR ANY DAMAGES), INCLUDING WITHOUT LIMITATION ANY AND ALL DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES, RESULTING, IN WHOLE OR IN PART, FROM ANY USE OF, REFERENCE TO, OR RELIANCE UPON THE REPORT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. TCNA DISCLAIMS ALL LIABILITY TO ANY THIRD PARTY CONCERNING THIS REPORT. THE FOREGOING LIMITATION OF LIABILITY IS A FUNDAMENTAL ELEMENT OF TCNA'S AGREEMENT TO CONDUCT AND PROVIDE THE REPORT.

3/14/2021

Dr. Jyothi Rangineni  
Research Scientist



**PRODUCT PERFORMANCE TESTING LABORATORY**

100 Clemson Research Blvd., Anderson, SC 29625

Phone 864.646.8453 Fax 864.646.2821

Email [testing@tcnatile.com](mailto:testing@tcnatile.com) Web [www.TCNAtile.com](http://www.TCNAtile.com)

---

March 9, 2021

Ceramica San Lorenzo – Lamosa

Attn:

Av. Industrial S/N San Pedro – Lurin Plantal

Lima, Peru – Lima 16

Dear Mr.

Tile Council of North America has tested the samples you submitted. Test report TCNA-0925-20 Human Coronavirus 229Eis enclosed. If you have any questions or concerns, please contact us.

Best Regards,

TILE COUNCIL OF NORTH AMERICA, INC.

Dr. Jyothi Rangineni

Research Scientist

Enclosures

**TCNA TEST REPORT NUMBER:**

**TCNA-0925-20**

**PAGE: 1 OF 3**

**TEST REQUESTED BY:**

Ceramica San Lorenzo – Lamosa  
Av. Industrial S/N San Pedro – Lurin Plantal  
Lima, Peru – Lima 16

**TEST SUBJECT MATERIAL:**

Identified by client as: **“MADERA TRATADA”**

**TEST DATE:**

2/1/2021 - 3/5/2021

**TEST PROCEDURE:**

*ISO 21702:2019 Measurement of antiviral activity on plastics and other non-porous surfaces.* Test method was modified to test with viruses –Human Coronavirus 229E

**TEST CONDITIONS:**

Test sample size: 50 mm x 50 mm  
Sterilization of samples: UV sterilization for 15 minutes  
Test viruses and cell lines:

Virus	Cell line
Human Coronavirus 229E ATCC VR-740	MRC-5 ATCC CCL-171

Volume of test suspension applied on test sample:

0.4 mL

Infectivity titer of virus:

$10^6$  TCID<sub>50</sub>/mL

Environmental conditions for contact time:

Temperature at 25°C ± 1  
RH ≥ 90%





---

**TCNA TEST REPORT NUMBER:**

**TCNA-0925-20**

**PAGE: 2 OF 3**

**Test Results:** Results of testing performed on **MADERA TRATADA** with  
Human Coronavirus 229E

Sample	Virus	Cell line	Infectivity titer TCID <sub>50</sub> /mL	Contact time	Percentage Reduction (%)*
Sample 1	Human Coronavirus 229E	MRC-5	TCID 10 <sup>6</sup> /mL	24 hr	99.9%
Sample 2					99.9%
Sample 3					99.9%

\*Percentage reduction calculated per infectivity titer recovered from the glass samples after 24 hours of contact time with virus





**TCNA TEST REPORT NUMBER: TCNA-0925-20**  
**DISCLAIMER AND LIMITATION OF LIABILITY**

**PAGE: 3 OF 3**

This report is provided for the sole use of the client and no one else. It is intended for professional use by a knowledgeable professional. If published by the client, it must be published in full, including this disclaimer and limitation of liability.

This report is not an endorsement, recommendation, approval, certification, or criticism by TCNA of any particular product or its application. TCNA recommends that anyone considering the use or installation of a particular product consult with the manufacturer or an industry professional for advice specific to the person's needs and consider any applicable laws, statutes, codes, or regulations relevant to the particular product. TCNA does not know all the different manners and applications in which a client's particular product might be used, and, therefore, it disclaims any and all duty to provide warnings or to further investigate the suitability of the use of a particular product in a particular situation.

Unless otherwise expressly stated, TCNA tested the specific test subject material provided by the client and identified in the lab report, as indicated by the client. TCNA does not independently verify the information provided by the client, and it makes no representation that similar results would be achieved with other, untested materials, even if such other materials purportedly have the same product name, are purportedly of the same or similar type of tile or product made by the client, or are purportedly from the same batch of tile or product. Nor does TCNA state that the date in this report is representative of production occurring at the same time or at any other time. Only the manufacturer may make that claim, based on sampling and quality control parameters beyond the knowledge and control of TCNA. TCNA does not provide any supervision, review, management, or quality control of any manufacturer's production.

TCNA makes no representation that the client's products are uniform or identical to the test subject material, that the test subject material is suitable for any particular use, application, or installation, or that it will exhibit the same properties when installed or used in a particular manner. The data provided in this report results from standardized laboratory testing performed under laboratory conditions. As such it does not represent all conditions under which the products may be used or subjected. For testing on actual materials being used or considered for a job site, contact TCNA for sampling provisions and possible testing.

This report is intended solely to provide the results of the test procedure stated above as performed on the test subject material provided by the client, and may not be relied on for any other purpose. TCNA MAKES NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY DISCLAIMED. IN THE EVENT OF A DISPUTE CONCERNING THIS REPORT, THE EXCLUSIVE REMEDY FOR CLIENT SHALL BE FOR TCNA TO REPEAT THE TEST REQUESTED, BUT IN NO EVENT SHALL TCNA BE LIABLE FOR AN AMOUNT GREATER THAN THE AMOUNT IT RECEIVED FROM CLIENT FOR THE TEST. UNDER NO CIRCUMSTANCES WILL TCNA BE LIABLE TO CLIENT FOR ANY OTHER DAMAGES (NOR SHALL IT BE LIABLE TO ANY OTHER PERSON OR BUSINESS ENTITY FOR ANY DAMAGES), INCLUDING WITHOUT LIMITATION ANY AND ALL DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES, RESULTING, IN WHOLE OR IN PART, FROM ANY USE OF, REFERENCE TO, OR RELIANCE UPON THE REPORT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. TCNA DISCLAIMS ALL LIABILITY TO ANY THIRD PARTY CONCERNING THIS REPORT. THE FOREGOING LIMITATION OF LIABILITY IS A FUNDAMENTAL ELEMENT OF TCNA'S AGREEMENT TO CONDUCT AND PROVIDE THE REPORT.

3/9/2021

\_\_\_\_\_  
Dr. Jyothi Rangineni  
Research Scientist