DNA and RNA from saliva for microbiology sampling

All-in-one system for the collection and rapid stabilization of microbial nucleic acids

Microarrays and Next Generation Sequencing give researchers the ability to easily detect and quantitate molecular targets in a highly multiplexed fashion. Due to the complex nature of samples required for metagenomic research of the microbiome, bias can be easily introduced through improper sample collection, stabilization and transport.

- Provides a snapshot of the microbial profile at time of collection and prevents microbial growth
- Stabilizes RNA at room temperature and DNA up to 37°C for 3 weeks
- Easy self-collection of high quality DNA and RNA from oral samples
- Eliminates the need for cold chain transportation
- Compatible with downstream applications (e.g., RT-qPCR, microarray)

"By using HOMIM (Human Oral Microbe Identification Microarray), we demonstrated that saliva samples stored in OMNigene•ORAL were stabilized for at least 3 weeks, even at 37 degrees. This is outstanding! Consequently, I think OMNigene•ORAL would alleviate the need for a -80 freezer or, for that matter, any refrigeration to preserve samples. This is an incredible benefit for any investigator who is interested in preserving precious clinical samples, especially for use with molecular analyses of genomic material."

Bruce J. Paster, Ph.D., Director, Human Microbe Identification Microarray Core Head, Department of Molecular Genetics, The Forsyth Institute

For more information contact info@dnagenotek.com
Benefits

- Stabilizes samples at point of collection ensuring the DNA and RNA is unchanged at time of processing
- Facilitates simultaneous detection of DNA and RNA from bacteria and viruses all from one sample
- Reduces transportation and storage cost and complexity with 3 weeks of ambient temperature stability of DNA and RNA
- Enables identification of the living or metabolically active bacteria at time of collection through RNA expression profiling
- Format compatible with high-throughput processing increases efficiency and minimizes sample handling errors

Supporting evidence

<table>
<thead>
<tr>
<th>Subject</th>
<th>Target</th>
<th>Reference</th>
</tr>
</thead>
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<tr>
<td><strong>Virus</strong></td>
<td>DNA</td>
<td>EBV(^1), HHV-8(^2, 3), CMV(^4)</td>
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<tr>
<td></td>
<td>RNA</td>
<td>HCV(^5), HIV(^5, 6)</td>
</tr>
<tr>
<td><strong>Bacteria</strong></td>
<td>DNA</td>
<td>HOMIM(^7)</td>
</tr>
<tr>
<td></td>
<td>RNA</td>
<td>E. coli(^9)</td>
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<tr>
<td><strong>Extraction systems</strong></td>
<td>DNA</td>
<td>Abbreviation Entity (OM-505) fnameElute(^8)</td>
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<td><strong>Downstream applications</strong></td>
<td></td>
<td>qPCR(^1, 2, 3), Microarray(^2)</td>
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</tbody>
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\(^{1}\) Stability, recovery efficiency and detection limit of human viral DNA in OMNIgene®ORAL (OM-S5). DNA Genotek. PD-WP-00028.
\(^{2}\) High quality microbial DNA collected with OMNIgene®ORAL enables detection of HHV-8 in saliva. DNA Genotek. MK-00018.
\(^{4}\) Genotyping of cytomegalovirus from toddlers’ saliva samples collected with OMNIgene®ORAL. DNA Genotek. MK-00056.
\(^{5}\) Compatibility of saliva collected using OMNIgene®ORAL (OM-505) with the Abbott m2000rt RealTime System for the detection of viral RNA. DNA Genotek. PD-WP-00025.
\(^{6}\) OMNIgene®ORAL (OM-505) stabilizes RNA from human viruses at room temperature for several weeks. DNA Genotek. PD-WP-00024.
\(^{7}\) OMNIgene®ORAL stabilizes microbial DNA profiles in oral fluid samples, enables more precise characterization of oral flora. DNA Genotek. MK-00050.
\(^{8}\) OM-505 Microbial DNA and RNA purification protocol using Qiagen® QIAamp® MinElute Virus Spin Kit. DNA Genotek. PD-PR-00014.

OM-505 kit contents

**Pre-use with packaging:**
- Dimensions: 14.0 x 8.0 x 2.8 cm
- Weight: 39 g
- Shelf-life: 24 months

Collected specimen is potentially infectious and should be handled with appropriate biosafety practices.
Ship in accordance to applicable regulations covering transport of biological specimens.

**Post sample collection specifications**
- Standard false bottom tube:
  - Tube diameter: 16 mm
  - Tube height (without cap): 93 mm
  - Sample stability: 3 weeks