

Sputum DNA Isolation Kit

Norgen's Sputum DNA Isolation Kit provides a rapid procedure for the isolation of sputum DNA. A sputum specimen is the name given to the mucus which is expectorated from the lower airways. The best sputum samples will contain very little saliva, as this contaminates the sample with oral bacteria. Sputum samples are typically evaluated to look for infections such as *Moraxella catarrhalis*, *Mycobacterium tuberculosis*, *Streptococcus pneumoniae* and *Haemophilus influenzae*. Other pathogens can also be detected in sputum including HIV. In addition, sputum DNA can be evaluated for the detection of lung cancer or to evaluate chronic inflammation.



Norgen's Sputum DNA Isolation Kit constitutes an all-in-one system for the isolation of DNA from sputum samples. The kit allows for the isolation of bacterial or eukaryotic DNA from the sputum samples using spin-column chromatography based on Norgen's proprietary resin. The genomic DNA is isolated free from inhibitors, and can then be used as the template in a number of downstream assays. The kit is designed to allow for the isolation of sputum DNA from 25 samples.

Kit Specifications			
Average Yield from 1 mL of Sputum*	75 µg	Time to Complete DNA Purification	< 1 hour
Average Purity (OD 260/280)	1.8 - 2.1		

*Average DNA yield will vary depending on the health status of the patient

Sputum DNA Isolation Kit Benefits

Non-invasive sample collection	Higher donor compliance and lower costs due to non-invasive sample collection.
Fast and easy processing	Rapid spin-column format allows for the processing of multiple samples in under 1 hour.
Compatible with Norgen's Collection and Preservation Kits	This product allows for the isolation of DNA from samples collected and preserved with Norgen's Sputum DNA Collection, Preservation and Isolation Kit (Cat# 46100)
Isolate DNA from small sputum samples	DNA can be isolated and detected from as little as 100 µL of sputum.
Recovered DNA is suitable for various downstream applications	Purified sputum DNA can be used in a number of downstream applications including PCR, Southern Blot analysis, sequencing and microarray analysis.

Sputum DNA Isolation Kit

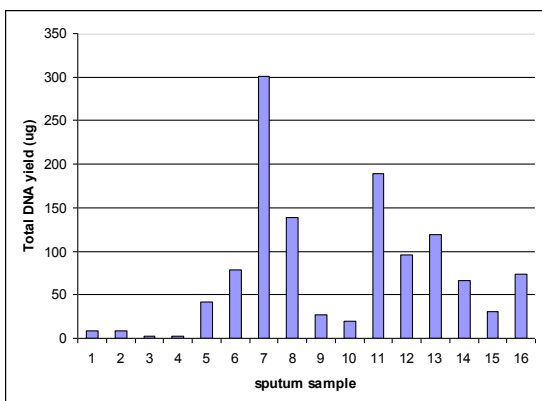


Figure 1. High Yield of Sputum DNA. Sixteen sputum samples were collected using Norgen's Sputum DNA Collection, Preservation and Isolation Kit and stored at room temperature for 1 day. DNA was subsequently purified using Norgen's Sputum DNA Isolation Kit, and the DNA yield was determined using the NanoVue Plus™ (GE Healthcare). The total average sputum DNA yield from 1.0 mL of preserved sputum of the 16 samples processed using Norgen's kit was 75.25 µg (indicated by the red line in the graph). Again it is important to stress that the yield of DNA obtained from each sample will vary from donor to donor as it relies heavily on the health status of the donor at the time the sample was taken

Storage Conditions

This kit contains ready-to-use Proteinase K which is dissolved in a specially prepared storage buffer. The Proteinase K should be stored at 4°C upon arrival (stable for 2 years) or at -20°C for long term storage. All other kit components should be kept tightly sealed and stored at room temperature (15 – 25 °C) for up to 3 years without any reduction in kit performance.

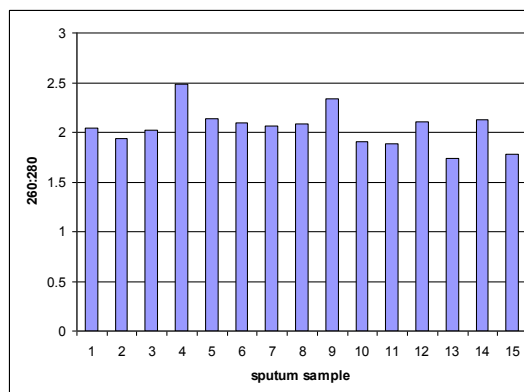


Figure 2. High Quality of Sputum DNA. Sixteen different sputum samples were collected using Norgen's Sputum DNA Collection, Preservation and Isolation Kit and stored at room temperature for 1 day. DNA was subsequently purified according to the provided protocol and the DNA yield was determined using a NanoVue Plus™ (GE Healthcare). The average $A_{260nm}:A_{280nm}$ ratio (indicated by red line in graph) obtained for each of the samples using Norgen's kit was 2.05 indicating the DNA is of very high quality.

Sputum DNA Isolation Kit Contents

1. Binding Solution I
2. Binding Solution II
3. Proteinase K
4. Wash Solution
5. Elution Buffer
6. Spin Columns
7. Collection Tubes
8. Elution Tubes
9. Product Insert

Shipping Conditions

The Sputum DNA Isolation Kit is shipped at room temperature.

Cat #	Description	Quantity
46200	Sputum DNA Isolation Kit	25 preps