## Supplementary Material

Table S1: Description of each criterion in detail and the corresponding score.

| | SCORE | | | | |
|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** |
| **Materials and Equipment** | Required different highly specific technical materials and equipment. | Required different highly specific technical materials or equipment. | Required different technical materials or equipment. | Required non-technical materials or equipment. | Not required technical materials or equipment. |
| **Infection Risk for the Health Professional** | Extremely high risk. | High risk. | Medium risk. | Low risk. | No risk. |
| **Infection Risk for the Patient** | Extremely high risk. | High risk. | Medium risk. | Low risk. | No risk. |
| **Collection** | The sample is typically obtained from patients who are severely ill or undergoing mechanical ventilation. Several risks associated with this procedure including akin to those observed in flexible bronchoscopy, including transient hypoxemia, post-BAL fever (which can be seen in up to 30% of patients), bronchospasm, and, very rarely, pneumothorax. This procedure can only be performed by a trained physician. | Collection involves an invasive methodology, there exists the potential for adverse effects such as pain, swelling, bruising, discoloration of tissue, or scarring. It is plausible that some tissue alterations and scarring could persist permanently. Collection procedures must be conducted exclusively by licensed technicians with the proper collection material. | It is generally regarded as a safe and well-tolerated procedure, although a multitude of complications have been frequently documented. Professionals must possess adequate anatomical knowledge and employ appropriate techniques. | While self-collection may be possible, it is advised that a healthcare professional collect. | Easy for non-professionals. Sample self-collected, eliminates the need for a trained health professional for sampling. |

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| **Average Cost (per sample)** | Plus 150 euros. | From 100 to 150 euros. | From 50 to 100 euros. | From 21 to 50 euros. | From 1 to 20 euros. |
| **Specialized HR** | The procedure can only be performed by a trained physician. | Collection procedures must be conducted exclusively by licensed technicians. | While self-collection may be possible, sampling should be performed by a licensed technician. | While self-collection may be possible without any specialization, it is advised that a healthcare professional collect. | Not required. |
| **RNA Extraction Type** | High complexity procedures<br>Low viral load | High complexity procedures<br>Hight viral load | Basic standard procedures<br>Low viral load | Basic standard procedures<br>Medium viral load | Basic standard procedures<br>High viral load |