

# How to choose the best quality Proteinase K in a diagnostic test?

Accurate diagnostic tests play an essential role in healthcare management. They help identify health conditions, estimate their stage, and determine genetic predisposition to develop the disease in the future, allowing for rapid and adequate medical treatment. While many of the various molecular diagnostic tests available today are utilized effectively, an increasing amount is reported to be lacking in value. Therefore, to avoid wasting resources and protect patients from unnecessary harm, the quality bar in the development of such tests should be set exceptionally high. Moreover, high-quality sample preparation is an essential step before the actual molecular analysis of the genetic material. This procedure includes stages such as sample isolation, purification, and concentration of the target product. As there are various reagents used in the process, which one should be the initial focus? The answer is Proteinase K of certified quality that assures high purity of tested nucleic acids.



## Why is the purity of Proteinase K essential?

Creating a diagnostic test benchmark that is available under reasonable conditions strongly depends on the purity of reagents. It is widely acknowledged that the low host DNA content increases the sensitivity and specificity of a diagnostic test. In the case of Proteinase K, host contamination is a significant challenge, especially regarding low input and variable quality of tested DNA. Ideally, NGS- and MBG-grade Proteinase K should respectively contain  $\leq 0.1$  and  $\leq 10$  pg/mg of host DNA, as well as be free of exo-, endo-, and ribonucleases. How can you be

sure that the product meets the specifications stated in its Certificate of Analysis? Choose a trusted supplier with adequate certifications (ISO 13485:2016), especially considering the new IVDR (coming into law in May 2022).



## What to look at in Proteinase K stability studies?

Proteinase K is relatively resistant to high temperatures, making it highly applicable in a broad range of specifications. Usually, its shelf-life in a liquid form is up to 24 months when stored at  $-20^{\circ}\text{C}$ . Therefore, why does temperature stability at ambient, and higher, temperatures become a desirable feature of Proteinase K? The answer is its cost efficiency during transportation and a guarantee of unchanged and temperature-independent activity, especially when added to ready-to-use and stored at room temperature kits.

## What should you look for in your Proteinase K supplier?

Quality and reliability are the critical success factors in any business. A trusted supplier is an essential element that guarantees continuity, stability, and reproducibility of test results. Undoubtedly, large-scale Proteinase K manufacturers offer a wide variety of product forms (cake, powder, liquid, bulk) and a broad range of services (CMO, OEM distribution, labeling, portioning, etc.). Such providers are the best suited for your application and, consequently, business development. The choice of the supplier should always be well-thought-out

and backed by results of Proteinase K sample testing (ideally from a range of separate batches to prove product consistency). Altogether, adequate certifications, experience, transparency, and adjustment flexibility are the key features to search for in your Proteinase K supplier.

At BLIRT, we provide the highest quality Proteinase K, available in large scale, various forms, and adjustable product formulations [1-7]. Our flexible business model enables us to meet your individual requirements and help your business grow. If you are searching for the perfect partner to cooperate with, BLIRT is the right choice.



## References

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