
**Rubber, raw natural, and rubber latex,
natural — Determination of nitrogen
content by Micro Dumas combustion
method**

*Latex de caoutchouc brut — Détermination de la teneur en azote par
la méthode de combustion de Micro Duma*

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Foreword

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The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

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Introduction

The Dumas combustion method has become the most frequently used method worldwide for the accurate and fast determination of nitrogen. Compared to the wet chemical Kjeldahl method, it is superior in terms of speed, safety, and environmental friendliness. The representative analysis of a natural product requires a larger sample size of up to 1 g or more.

The nitrogen content of natural rubber is related to the protein level. The protein content of natural rubber varies depending upon its source and methods used in its processing. Generally, raw natural rubber is expected to have a nitrogen content in the range of 0,3 % to 0,6 %. The normal latex grades have lower levels of nitrogen than the “dry” rubbers, with values around 0,2 %. However, “skim” rubber, with its high protein content, will have appreciably higher values, in the range of 1,5 % to 2,5 %.

This test method will help determine the nitrogen content of the raw natural rubber in the shortest possible time and will be helpful for laboratory quality control testing.

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