

## Optimization of a Method of Total RNA Extraction from *Mentha piperita*

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**Abstract :** *Mentha piperita* is a medicinal plant that contains a large amount of secondary metabolite that has adverse effect on RNA extraction. Since high quality of RNA is the first step to real time-PCR, in this study optimization of total RNA isolation from leaf tissues of *Mentha piperita* was evaluated. From this point of view, we researched two different total RNA extraction methods on leaves of *Mentha piperita* to find the best one that contributes the high quality. The methods tested are RNX-plus, modified RNX-plus (1-5 numbers). RNA quality was analyzed by agarose gel 1.5%. The RNA integrity was also assessed by visualization of ribosomal RNA bands on 1.5% agarose gels. In the modified RNX-plus method (number 2), the integrity of 28S and 18S rRNA was highly satisfactory when analyzed in agarose denaturing gel, so this method is suitable for RNA isolation from *Mentha piperita*.

**Keywords :** *Mentha piperita*, polyphenol, polysaccharide, RNA extraction

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