

Short Synthesis of a New Cyclopentene-1,3-dione Derivative Isolated from *Piper carniconnectivum*

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A síntese total da ciclopentenodiona (**1**), isolada das raízes de *Piper carniconnectivum*, é descrita em 8 etapas e 11% de rendimento global a partir do 2-acetilfurano, fornecendo uma mistura 57:43 dos dois possíveis isômeros geométricos **1a** e **1b**.

The total synthesis of cyclopentene-1,3-dione (**1**), a new natural cyclopentenodione derivative isolated from the roots of *Piper carniconnectivum*, is described in 8 steps and 11% overall yield from 2-acetyl furan, giving a 57:43 mixture of the two possible geometric isomers **1a** and **1b**.

Keywords: aldol reaction, allylic alcohol oxidation, cyclopentenodione derivative, *Piper carniconnectivum*

The cyclopentenodione (**1a/1b**) (Figure 1) is a new natural cyclopentenodione derivative that was isolated recently by Braz-Filho and coworkers¹ from the roots of a specimen of *Piper carniconnectivum*, collected in Porto Velho, Rondônia, in the northern part of Brazil. This specimen belongs to the tropical *Piperaceae* family, that comprises many important plants, very useful in folk medicine as bioproducts of essential oils.^{2,3} The structure of cyclopentenodione derivative (**1**) was established by spectroscopic data, mainly 1D and 2D NMR as well as by Electron Impact Mass Spectrometry (EIMS).¹ According to the authors,¹ the isolated cyclopentenodione derivative may have structure **1a** or **1b** or even exist as an equilibrium mixture between these two enol forms showing average ¹H and ¹³C NMR spectra due to a proposed rapid interconversion between **1a** and **1b**.

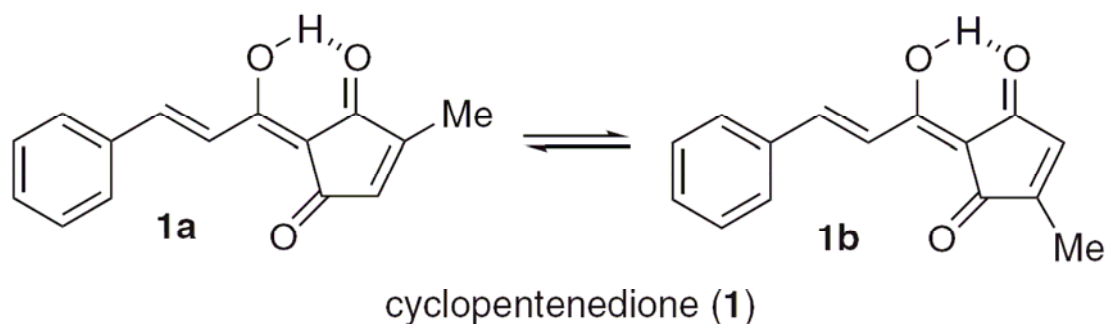


Figure 1. Enol forms of cyclopentenodione derivative (**1**).