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<b>Evento</b>	Salão UFRGS 2019: SIC - XXXI SALÃO DE INICIAÇÃO CIENTÍFICA DA UFRGS
<b>Ano</b>	2019
<b>Local</b>	Campus do Vale - UFRGS
<b>Título</b>	Synthesis of polar-terminated 3,5-diarylisoazole LC
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## Synthesis of polar-terminated 3,5-diarylisoxazole liquid crystals.

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### Abstract

Polar-terminated 3,5- diarylisoxazole liquid crystals (ILCs) were synthesized and their mesogenic behavior characterized by differential scanning calorimetry (DSC) and polarizing optical microscopy (POM). Titles ILCs are composed of 3,5- diarylisoxazole as a hard core, one alkyl chain and one long polar-terminated flexible spacer. Polar groups are hydroxyl, bromine, ketal and 1,2-diol. ILCs Polar-terminated ILCs are hydroxyl-, bromine-ketal- and 1,2-diol-terminated .

In this communication, we describe the synthesis of polar liquid crystals containing the 3,5- diarylisoxazole ring, which was obtained by the [3+2] 1,3-dipolar cycloaddition followed by the oxidation reaction of the respective isoxazoline. The next step was deprotection reaction using HBr / AcOH to provide the corresponding phenol. The next step was two alkylation reactions with the 1,10-dibromodecane and 1,4-dibromobutane in acetone and reflux for 72 hours. Both alkylating agents were used in excess in a ratio of 1:3. Excess of the reagent was removed through the soxhlet extractor using hexane as solvent. In the next steps will be the insertion reactions of other polar groups such as 1,2- diol and ketal.

All ILCs compounds will be characterized by Infrared, H<sup>1</sup> and C<sup>13</sup> NMR spectroscopy, as well as polarized light microscopy, DSC and X-ray.

### Acknowledgments

This work was supported by MCT/CNPq Ed. Universal 01/2016 n° 403075 2016-5, FAPERGS, PPGQ-UFRGS and BIC-UFRGS – 2019/2020.

### References

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