

## Comparison of Two Artificial Accelerated Weathering Methods of Larch Wood with Natural Weathering in Exterior Conditions

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**Abstract :** With growing popularity, wood of European larch (*Larix decidua*, Mill.) is being more often applied into the exterior, usually as facade elements, also without surface treatment. The aim of this work was to compare two laboratory tests of artificial accelerated weathering of wood with two ways of natural weathering in the exterior. To assess changes in selected surface characteristics of larch wood, accelerated weathering methods in the Xenotest and UV chamber were used, both in combination with temperature cycling, for 6 weeks. They were compared with natural weathering results at exposition under 45° and 90° in the exterior for 12 months. The changes of colour, gloss, contact angle of water and also changes in visual characteristics were evaluated. The results of wood surfaces changes after 6 weeks of accelerated weathering in Xenotest are closer to 12 months of natural weathering in the exterior at an angle of 90° compared to the UV chamber testing. The results, especially the colour changes, of the samples exposed at an angle of 45° in the exterior were significantly different. Testing in Xenotest more closely simulates the weathering of facade elements in the exterior compared to the UV chamber testing.

**Keywords :** larch wood, wooden facade, wood accelerated weathering, weathering methods

**Conference Title :** ICBAE 2019 : International Conference on Building and Architectural Engineering

**Conference Location :** Bangkok, Thailand

**Conference Dates :** August 19-20, 2019