



**Unité AFNOR Normalisation**  
**Département Génie Industriel et Environnement**

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References : CEN TC 351 WG 2

Objet : EMPIR Project

**STAIR EMPIR secretariat,**  
**Mr Ortwin COSTENOBLE**  
[empir@nen.nl](mailto:empir@nen.nl)

December 10, 2018

Dear Mr COSTENOBLE,

On behalf of CEN/TC 351/WG 2 I hereby express the need for further research and validation work on the development of suitable reference materials and reference gas standards as recommended by EN 16516.

The item was discussed at the last meeting of WG 2 and got full support of the WG 2 experts (recommendation 7 of the CEN TC 351 WG 2 recommendations made at AFNOR on November, 28th).

Respective suggestions are made in the response form attached.

We remain for any consideration you may have,

Best regards,

**Convenor of CEN TC 351 WG 2**  
**Emissions from construction products into indoor air**

A handwritten signature in black ink, appearing to read "V. Eudes", written over a horizontal line.

**Véronique EUDES**

# RESEARCH AND STANDARDISATION

## RESPONSE FORM for Standardisation groups



### To contribute to *EMPIR - the European Metrology Programme for Innovation and Research* \*

**Objective: to collect standardization needs and suggestions to develop research projects in testing and measurements for the upcoming EMPIR calls (2019 and 2020)**

In the frame of the between CEN, CENELEC and EURAMET, CEN and CENELEC have been invited by the EURAMET Management to put forward their **testing and measurement needs in research** for consideration by metrology institutes for future calls under EMPIR.

**Relevant technical groups** (sector fora, advisory boards, coordination groups, TCs, WGs...) **are invited to contribute with**

- a short introduction or an overview paper of their unaddressed standardization needs for testing and measurement, and
- a contact person (secretary, chair, convenor, liaison officer, etc.) whom proposers for the Potential Research Topics can contact,

by using this Response Form and send it at :

STAIR EMPIR secretariat, Mr Ortwin Costenoble: [empir@nen.nl](mailto:empir@nen.nl)

Deadline for the consultation: **14 December 2018**.

*Proof of need by the TC/SC is highly recommended for a successful submission.*

<b>Source of the identified need</b> (identification of TC, WG, etc, incl. title)	<input checked="" type="checkbox"/> CEN/TC 351/WG 2 <input type="checkbox"/> CLC/TC 0/WG 0 <input type="checkbox"/> ISO/TC 0/SC 0 / WG 0 <input type="checkbox"/> IEC/TC 0/SC 0 / WG 0 <input type="checkbox"/> Other, namely <i>Identification, Title</i>
<b>European entity</b> responsible for submission of the need	<i>CEN/TC 351 Construction Products – Assessment of release of dangerous substances</i>
<b>Person that can be contacted for more detail</b>	<i>Caroline Lhuillery (CEN/TC 351/WG 2, secretary) <a href="mailto:caroline.lhuillery@afnor.org">caroline.lhuillery@afnor.org</a> +33 (0)1 41 62 86 63 France</i>
<b>Unaddressed need</b> (short description)	<i>Metrology for the determination of emissions of dangerous substances into indoor air (Co-normative action)</i>
<b>Further explanation of need</b> (TC business plan, road map, formal decision, work item, etc.)	<i>Since January 2018 the European testing standard EN 16516 is published and describes a mandatory procedure for the determination of material emissions into indoor air by use of emission test chambers. In the last decades, a network of testing institutions has been established dealing with such tests. Comparability between the measurement results is one of the most critical points.</i>

	<p><i>EN 16516 demands that “notified and accredited laboratories shall verify performance of the whole method by comparing against external references [...]. Participation in round robin tests and relevant independent analytical proficiency testing schemes is useful [...] and is strongly recommended”.</i></p> <p><i>Emission reference materials (ERM) for the simulation of materials emissions that can either be used for lab-internal performance checks or round robin tests (RRT) must be long-term stable and have reproducible and homogeneous emission properties. The emissions should furthermore cover the relevant substance spectrum from the VOC (carbon number C<sub>6</sub>-C<sub>16</sub>) up to the SVOC range (C<sub>16</sub>-C<sub>22</sub>). Certified ERMs are currently not commercially available and therefore the verification against external references is still not guaranteed.</i></p> <p><i>Apart from the ERMs applied for checking the overall emission test chamber procedure, also the availability of reference gas standards for dangerous substances occurring in indoor air is still dissatisfying. For the health-based evaluation of emissions from materials, a list of compounds (LCI-list) already exists on a European level (EU-LCI working group). This list might finally contain 150-200 target compounds to be identified and quantified in the test chamber atmosphere. It is of great importance that more research is undertaken for the development of primary gas standards involving these target compounds.</i></p> <p><i>Besides research for the development of certified ERMs and primary gas standards, there is a need for collecting validation data, e.g. obtained from inter-laboratory comparisons in this field, to be used for precision and accuracy specifications for future revision of the testing standard EN 16516.</i></p>
<b>Enclosures</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

\*See more information at [EMPIR website](#)  
[CEN/CENELEC website](#) “Standards and metrology”