P2520.3.1

Submitter Email: e.danesh@gmail.com
Type of Project: New IEEE Standard
Project Request Type: Modify / New
PAR Request Date: 22 Feb 2021
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PAR Status: Active
Root PAR: P2520.3.1
Root PAR Approved on: 23 Sep 2020

1.1 Project Number: P2520.3.1
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Project Title: Standard for Machine Olfaction Devices and Systems Used for General Indoor Odor Monitoring
Change to Title: Standard for Machine Olfaction Devices and Systems Used ~~in~~ for General Indoor ~~Air Quality~~ Odor Monitoring

3.1 Working Group: Machine olfaction devices and systems used for general indoor odour monitoring(SEN/SC/TMODS/IOM/2520.3.1)
3.1.1 Contact Information for Working Group Chair:
Name: Ehsan Danesh
Email Address: e.danesh@gmail.com
3.1.2 Contact Information for Working Group Vice Chair:
None
3.2 Society and Committee: IEEE Sensors Council/Standards Committee(SEN/SC)
3.2.1 Contact Information for Standards Committee Chair:
Name: Gerard Hayes
Email Address: gerardjameshayes@gmail.com
3.2.2 Contact Information for Standards Committee Vice Chair:
None
3.2.3 Contact Information for Standards Representative:
None
3.3 Co-Stds Committee(s):
3.3.1 IEEE Industrial Electronics Society/Industrial Electronics Society Standards Committee (IES/IES)
Contact Information for Standards Representative:
Name: Victor Huang
Email Address: vklhuang@aol.com

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot: Apr 2022
Change to Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot: ~~Jan~~ Apr 2022
4.3 Projected Completion Date for Submittal to RevCom: Apr 2023
Change to Projected Completion Date for Submittal to RevCom: ~~Jan~~ Apr 2023

5.1 Approximate number of people expected to be actively involved in the development of this project: 15
5.2 Scope of proposed standard: This standard specifies a step-wise approach with test methods for performance verification of machine olfaction systems and devices that are designed to monitor indoor odors.

5.3 Is the completion of this standard contingent upon the completion of another standard? Yes
Explanation: This standard will build upon the requirements of Standard 2520.1 for baseline performance for odor analysis devices and systems.
5.4 Purpose: This standard defines procedures for assessing the performance of a device that is designed to monitor indoor odors, mainly related to volatile organic compound (VOC) sources, that may cause odor nuisance or safety risks. This standard contains important quantitative and technical specifications for odor

testing methods intended to improve the reliability of odor analysis indoors and to realize broader use of odor monitoring devices.

5.5 Need for the Project: Electronic nose (e-nose) devices are used more and more for ambient air quality monitoring purposes and in some countries are starting to have legal value. Nevertheless, the complex nature of indoor odors and long-term stability issues impose fundamental challenges for reliable quality checks on these instruments. Therefore, there is a need for standardized test protocols for performance verification of the measurement systems. This standard enables manufacturers to establish the quality assurance level (QAL) of their instruments. It will also provide tools for the end-user to evaluate instrument suitability, quantify measurement uncertainty, and establish an appropriate calibration/ maintenance program.

5.6 Stakeholders for the Standard: Sensor manufacturers, instrument manufacturers, companies purchasing instruments for general applications, users who monitor odors, academics and those in the research sector, regulatory agencies.

6.1 Intellectual Property

6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project? No

6.1.2 Is the Standards Committee aware of possible registration activity related to this project? No

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7.1 Are there other standards or projects with a similar scope? No

7.2 Is it the intent to develop this document jointly with another organization? No

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8.1 Additional Explanatory Notes: