

Comparison guide

Medtronic

BIS™ sensor vs. MedLinket™* sensor and MedKer™* sensor

Differentiators	BIS™ sensor Medtronic	MedLinket™* BIS imitation sensor	MedKer™* BIS imitation sensor	Why is this important for you
Compatible with BIS™ monitor	BIS™ sensors are validated to work with the BIS™ complete monitoring system ¹	Not validated with the BIS™ complete system	Not validated with the BIS™ complete system	The BIS™ complete system consists of unique designed and compatible products. Medtronic does not approve the use of other electrodes or sensors on its monitor and will not assume liability for any damage or incident caused by the use of other electrodes or sensors.
Type of electrode	EEG electrode ²	ECG electrode ³	EEG electrode ⁴	EEG electrodes are used for measuring electrical activities of the brain. ECG is used for measuring the activities of the heart. These 2 electrode sensors are constructed differently.
Signal acquisition technology	Zipprep™ technology	No specific product info available online. Manufacturer mentions conductive plastics in composition of sensor. ⁵	Stylus fat-free technology (no info found on working principal on website) ⁶	The Zipprep™ technology allows to clear away some of the first layer of dead skin cells, exposing the inner, more electrically-conductive layer of skin. This creates an optimal environment for EEG signal acquisition.
Dimensions of sensor paddle	The dimensions of the BIS™ sensor are designed to be combined with the BIS™ monitor. ⁷	The dimensions of the MedLinket paddle differ from that of the BIS™ sensor. ⁷	No data available	The dimensions of the MedLinket paddle differ from the BIS™ sensor, making it difficult to insert and remove from the monitor, which may cause equipment damage over time.
Interaction with BIS™ monitor	Each BIS™ sensor has a chip which has its own ID. This makes sure the monitor knows that data coming from this sensor is linked to an individual patient. Using different case ID's for different patients makes sure historical patient data can be exported. ⁷	All MedLinket™* sensors have the same manufacturing code, indicating cloned chips, and all sensors have the same case ID. This could cause incorrect interpretation of information and delivered care. Additionally, use of the same case ID for multiple patients inhibits the ability to export historical patient data. ⁷	No data available	The cloned chips used in generic sensors raises safety concerns, as the same case ID may be used across multiple patients. This mixing of patient data can result in confusion and misguided care, as data from a previous patient may accidentally be consulted during the care of subsequent patients. ⁷
Evidence based technology	BIS™ sensors have a high variety of publications. Used in more than 2300 articles.*	No publications are available on website or online ⁵	No publications are available on website or online ⁶	The BIS™ sensor has systematic reviews and meta-analyses as prestigious as the Cochrane. BIS™ sensors were used in a large number of peer reviewed prospective studies.
OEM BIS module compatibility	Tested and validated ^{8,9}	No data available	No data available	The BIS™ monitor/modules are validated with the BISX/BISX4 and our proprietary sensors. In case that a non-Medtronic sensor is used, we can't support performance claims and it would be considered off-label use.

Pubmed search strategy performed on 27/10/2023: BIS identification AND (Primary studies OR Secondary studies) = 2 369 articles.
Details of search terms used on file at Medtronic

References:

1. BIS monitor Operator's manual 3.3.4 Electromagnetic Compatibility Requirements
2. DECLARATION OF CONFORMITY Flexible Circuit Sensors Medtronic 10094777, Rev 202 21 March 2021
3. DECLARATION OF CONFORMITY Med-linked Shanghai JSWD002-02 B4 2019-03-13
4. DECLARATION OF CONFORMITY Medker SUNGO Europe NL-AR-000000247
5. Medlinket official website. Accessed 2/March/2024: <https://www.med-linket.com/>
6. Medker official website. Accessed 2/March/2024: <https://en.medker.cn/>
7. Glozman D., et al, Comparison of BIS™ sensors to generic sensors. Research and Development, Patient Monitoring, Medtronic.
8. Datex-Ohmeda E-Modules Technical Reference Manual
9. DECLARATION OF CONFORMITY BISX Module Philips 10110830, Rev L

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Important: Please refer to the package insert for complete instructions, contraindications, warnings and precautions.

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