

MCScap-CS22 electrode

Ag/AgCl electrode for transcranial electrostimulation (tDCs / tACs) and EEG recording, 22 mm in diameter, with TouchProof 1.5 mm connector, wire length 1.2 m.

REF

003-0-107



SET

- MCScap-CS22 electrode,
- Sponges D22 - 2 pcs.

INTENDED USE

Transcranial electrical stimulation (TES, tACS). EEG recording.

DESCRIPTION

MCScap-CS22 is a reusable electrode with a diameter of 22 mm of sintered Ag/AgCl, designed for carrying out transcranial electrical stimulation (TES), mainly by alternating current (tACS - transcranial alternating current stimulation), and recording the electroencephalogram (EEG).

When using electrodes in the stimulation mode, the maximum allowable current density values recommended by the scientific or clinical community, which depend on the size and shape of the current, should be taken into account. Examples of calculating the current density for MCScap-CS22 and MCScap-CS22SS electrodes for a number of stimulation current values are given in the table.

Stimulation current	Current density
4 mA	1.05 mA/cm ² (10.5 A/m ²)
3 mA	0.79 mA/cm ² (7.9 A/m ²)
2 mA	0.53 mA/cm ² (5.3 A/m ²)
1 mA	0.26 mA/cm ² (2.6 A/m ²)
500 μA	0.13 mA/cm ² (1.3 A/m ²)

The electrode is an electrically conductive disk with a hole in the center, surrounded by a molded case with an elastic skirt ring, providing a comfortable fit to the skin and an increased contact area.

MCScap-CS22 electrodes are designed for installation in MCScap® textile caps. The electrodes are fixed on the inside of the cap, and the wires are released through the ventilation holes.

The electrode has a universal connector TouchProof 1.5 mm, which fits most EEG amplifiers.



SPECIFICATION

Material of electrode conductive surface	Ag/AgCl sintered
Electrode body material	polyurethane
Square of electrode conductive surface	176 mm ²
Internal diameter of the electrode at the point of contact of the electrode contact substance with the skin	22 mm
Surface area of contact of the electrode substance with the skin	380 mm ²
Outer diameter of the electrode at the point of contact with the skin	26 mm
Distance from the skin to the electrode conductive surface	2.5 mm
The diameter of the hole in the electrode to add gel	2.8 mm
Own noise of an electrode in the mode of registration of EEG in a range 0,5...30 Hz	less then 2 μ V
Electrode polarization in EEG recording mode	\leq 10 mV
Maximum allowed current through the electrode in the stimulation mode	10 mA
Maximum operating voltage	100 V
Electrode polarization	\leq 50 mV
Resistance of electrodes insulation	\geq 1000 M Ω
Dielectric strength of electrodes insulation	1500 V
The impedance of the electrode	\leq 5 k Ω
Electrode cable length	1.2 m
Connector type	TouchProof 1.5 mm (DIN 42 802-ST)
Net weight	< 8 g
Gross weight	< 8 g

