

Neuromyographer NMA-4-01 "Neuromyan"

catalogue



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** The external appearance of the products is given as an example and may have some differences that do not affect functionality when delivered.*

Neuromyoanalyser NMA-4-01 "Neuromyan"

Comes in two, four and five-channel modifications for electromyographic and evoked potentials (EP) studies. Flexible combination of methodical software versions and neuromyograph's modifications provide different variants of functional capabilities of the device. Effectively used in functional diagnostics rooms, neurological departments, sports medicine, private practice and for scientific research.

The operation principle of the Neuromyoanalyser NMA-4-01 "Neuromyan" is based on the registration of electromyogram (EMG) of muscles using surface and invasive electrodes, as well as actions potentials (SNAP) of peripheral nerves and evoked potentials (EP) of central nervous system on visual, auditory, and electrical stimulation using surface electrodes. The device is a programmable medical electrical system controlled by a personal computer with special software and it includes a set of stimulators: (auditory stimulator, visual stimulator, electrostimulator), as well as a device for recording biopotentials with a set of electrodes and accessories

<i>Model name</i>	NMA-4-01 «Neuromyan» modification 01 (2 channels)	NMA-4-01 «Neuromyan» modification 02 (4 channels)	NMA-4-01 «Neuromyan» modification 03 (5 channels)	
<i>Application feature</i>	For muscle and peripheral nerves diseases diagnostics, and assessment of the state of vision and hearing.	for muscle and peripheral nerves diseases diagnostics, assessment of the state of vision and hearing, multichannel studies of symmetric muscles and their antagonists.	For fine differential diagnostics of the central and peripheral nervous system disorders, detailed study of the muscles disorders and testing of neuromuscular transmission using five channels.	Five-channel record of EP for detection by-chiasmatic and the central visual dysfunction is provided. Option of recording EP via two channels and EMG/ENG via three channels allows minimizing the need for changing the electrodes when performing EP and EMG tests.



Avilable electromyographic, neurographic and evoked potential diagnostic techniques

Basic set of electromyographic and electroneuromyographic (EMG/ENMG) techniques:	An additional set of EMG/ENMG techniques:	The technique of needle myography	The main set of techniques for evoked potentials study:	Pattern Reversal Visual evoked potentials (PRVEP)
<ul style="list-style-type: none"> • Motor Conduction Studies (MCS); • Sensory Conduction Studies (SCS); • Surface EMG (SEMG-1ch); • F-wave; • Repetitive Nerve Stimulation (RNS). 	<ul style="list-style-type: none"> • H-reflex; • Blink reflex; • Short segment studies (Inching); • Multichannel surface EMG (SEMG-mch). 		<ul style="list-style-type: none"> • Brainstem Auditory EP (BAEP); • Middle Latency Auditory EP (MLR); • Long Latency Auditory EP (LLR); • Somatosensory EP (SEP); • Long Latency Somatosensory EP (LLSEP); • Flash Visual EP (FVEP). 	

Electronic card file software, data storage, preparation of output documents, printing of research results "Cardfile"

These techniques allow assessing the state of the peripheral nervous system, including the pyramidal, afferent somatosensory pathways, the motor neuronal pool, peripheral motor, sensory and mixed nerves, synaptic transmission and muscles, and identifying pathologies of the visual, auditory and sensory pathways. The methods allow localizing the site of the lesion, its size and depth, and also assessing the stage of the pathological process, predicting its course and objectively accompanying the course of treatment.

No	REF-code	Photo	Description	Comments
1.	Basic neuromyograph's accessories set			
1.1.	A_2987	Basic set for Modification 01 (2-channel), including:		
1.1.1.	A_2985		<p>Amplifier Unit, NMA-4-01M01, 2-channels</p> <p>for muscle and peripheral nerves diseases diagnostics, and assessment of the state of vision and hearing.</p>	<p>The basic set A_2987 should be supplemented with:</p> <ul style="list-style-type: none"> • the required software (see clause 2); • a set of electrodes and accessories required for software techniques (see clause 3, 4, 5); • computer equipment (see clause 6).
1.1.2.	A_1665		<p>Table Mount for Amplifier Unit</p> <p>for desktop mounting of Amplifier Unit</p>	<p>The customer can additionally purchase:</p> <ul style="list-style-type: none"> • Footswitch FSRC -3 – foot switch for stimulation control (see clause 1.4.1)

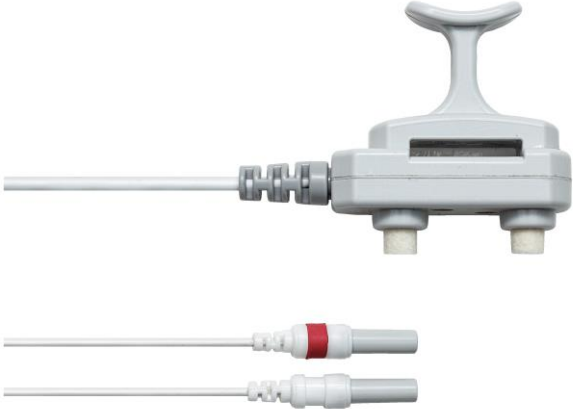

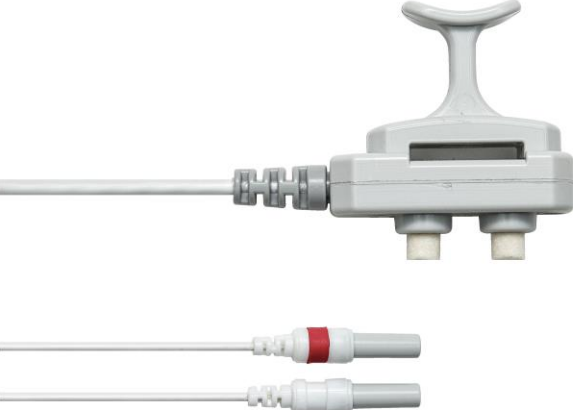
1.1.3.	A_3061		Remote controller E-Stimulator RC-NMA21 (functional keyboard) functions as a traditional keyboard of neuromyograph and electrostimulator's handle at the same time	
1.1.4.	A_2999	Basic set of electrodes and accessories *		
1.2.	A_2988	Basic set for Modification 02 (4-channel), including:		
1.2.1.	A_2986		Amplifier Unit, NMA-4-01M02, 4-channels for muscle and peripheral nerves diseases diagnostics, assessment of the state of vision and hearing, multichannel studies of symmetric muscles and their antagonists.	The basic set A_2988-1 should be supplemented with: <ul style="list-style-type: none"> • the required software (see clause 2); • a set of electrodes and accessories required for the software techniques (see clause 3, 4, 5); • computer equipment (see clause 6).




1.2.2.	A_1665		Table Mount for Amplifier Unit for desktop mounting of Amplifier Unit	
1.2.3.	A_3061		Remote controller E-Stimulator RC-NMA21 (functional keyboard) functions as a traditional keyboard of neuromyograph and electrostimulator's handle at the same time	
1.2.4.	A_2999	Basic set of electrodes and accessories *		
1.2.5.	A_3069		Footswitch FSRC-3 required for the convenience of switching between functional tests during needle myography (MUP), as well as for switching between functional tests during surface EMG (Surf-1ch)	

1.3.	A_2941	Basic set for Modification 03 (5-channel), including:		
1.3.1.	A_2938		<p>Amplifier Unit, NMA-4-01M03, 5-channels</p> <p>For fine differential diagnostics of the central and peripheral nervous system disorders, detailed study of the muscles disorders and testing of neuromuscular transmission using five channels.</p> <p>Five-channel record of EP for detection by-chiasmatic and the central visual dysfunction is provided.</p> <p>Option of recording EP via two channels and EMG/ENG via three channels allows minimizing the need for changing the electrodes when performing EP and EMG tests.</p>	<p>The basic set A_2941 should be supplemented with:</p> <ul style="list-style-type: none"> the required software (see clause 2); a set of electrodes and accessories required for the software techniques (see clause 3, 4, 5); computer equipment (see clause 6).
1.3.2.	A_1665		<p>Table Mount for Amplifier Unit for desktop mounting of Amplifier Unit</p>	


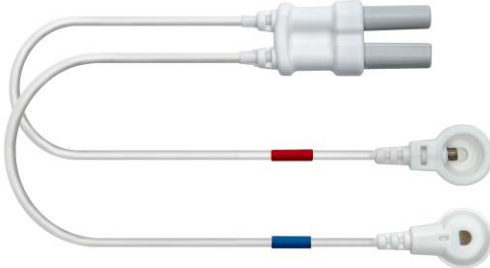

1.3.3.	A_3061		Remote controller E-Stimulator RC-NMA21 (functional keyboard) functions as a traditional keyboard of neuromyograph and electrostimulator's handle at the same time	
1.3.4.	A_2999	Basic set of electrodes and accessories *		
1.3.5.	A_3069		Footswitch FSRC-3 required for the convenience of switching between functional tests during needle myography (MUP), as well as for switching between functional tests during surface EMG (Surf-1ch)	
	A_2999	* Basic set of electrodes and accessories , included in each basic set, contains:		
				Included in basic sets' price
	A_4822		Snap Connector Wire	
	A_5223		Grounding Strap Electrode (for children) (length – 20 cm)	

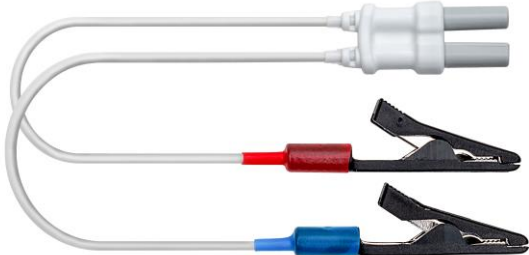




	A_2936		Grounding Strap Electrode (small) 2 pcs. (length – 25 cm)	
	A_2937		Grounding Strap Electrode (medium) 2 pcs. (length – 45 cm)	
	A_5222		Grounding Strap Electrode (large) (length – 70 cm)	
	A_8321		Universal Stimulation Cable	





A_3245		 The image shows a stimulating bar electrode with a white plastic handle and a grey base. Two white cables are connected to the base. Below the main unit, two individual white cables with red and white connectors are shown.	Stimulating bar electrode ESS-23/F6 with felt pads	
A_6335		 The image shows a stimulating bar electrode with a white plastic handle and a grey base. Two white cables are connected to the base. Below the main unit, two individual white cables with red and white connectors are shown.	Stimulating bar electrode SH23/D7 (with handle)	
A_3244		 The image shows a stimulating bar electrode with a white plastic handle and a grey base. Two white cables are connected to the base. Below the main unit, two individual white cables with red and white connectors are shown.	Stimulating bar electrode ESS-15/F6 with felt pads	




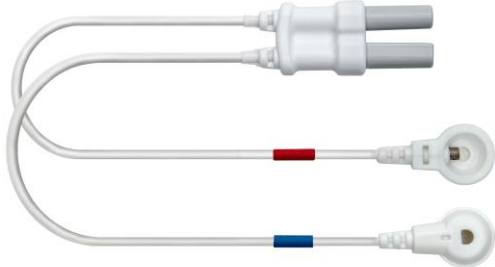
	A_1517		Felts duplicate set , 20 pcs.	
	A_0467		Syringe for gel 2ml (for electrode gel insertion)	
1.4.		Additionally to any set:		
1.4.1.	A_3069		Footswitch FSRC-3 required for the convenience of switching between functional tests during needle myography (MUP), as well as for switching between functional tests during surface EMG (Surf-1ch)	Included into a basic sets <ul style="list-style-type: none"> • for modification 02 (4-channel); • for modification 03 (5-channel). It is recommended to complete the 2-channel modification when using Needle EMG and EMG
1.4.2.	A_3378	Magnetic stimulator (used in MCS) for transcranial magnetic stimulation of the cerebral cortex, stimulation of the spinal cord and peripheral nervous system		
				The purchased product, approved for use in the Russian Federation, is supplied according to the Customer's specification or is purchased by the Customer independently


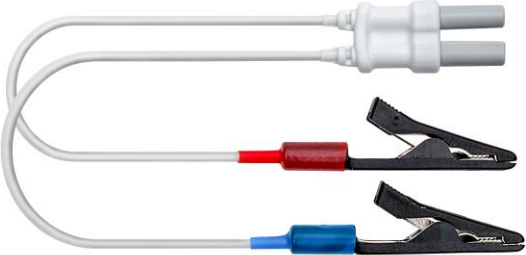
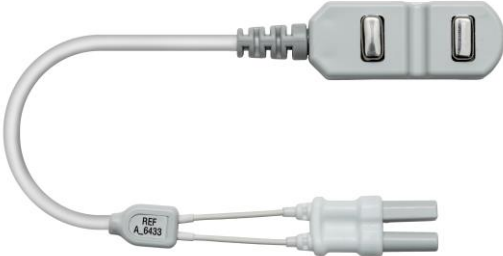


2.	Installation disk (A_1358) with software (SW) "Neuromyan", contains:		
2.1.	A_1358-1	Basic set of electromyographic and electroneuromyographic (EMG/ENMG) techniques: <ul style="list-style-type: none"> • Motor Conduction Studies (MCS); • Sensory Conduction Studies (SCS); • Surface EMG (SEMG-1ch); • F-wave; • Repetitive Nerve Stimulation (RNS). 	Attention! Requires purchasing electrodes and accessories (see section 3)
2.2.	A_1358-2	An additional set of EMG/ENMG techniques: <ul style="list-style-type: none"> • H-reflex; • Blink reflex; • Short segment studies (Inching); • Multichannel surface EMG (SEMG-mch). 	Attention! Requires purchasing electrodes and accessories (see sections 3.2 or 3.4, depending on the modification). When combining sets of techniques according to sections 2.1 and 2.2, optimized sets should be used (see sections 3.3. and 3.5.)
2.3.	A_1358-3	The technique of needle myography	Attention! Requires purchasing electrodes and accessories (see section 3.6)
2.4.	A_1358-4	The main set of techniques for evoked potentials study: <ul style="list-style-type: none"> • Brainstem Auditory EP (BAEP); • Middle Latency Auditory EP (MLR); • Long Latency Auditory EP (LLR); • Somatosensory EP (SEP); • Long Latency Somatosensory EP (LLSEP); • Flash Visual EP (FVEP). 	Attention! Requires purchasing electrodes and accessories (see section 4).
2.5.	A_1358-5	Pattern Reversal Visual evoked potentials (PRVEP)	Attention! It is necessary to have an additional PC monitor and a video stimulus synchronization sensor (see sections 6.4 and 6.5). In addition to the main set.






2.6.	A_2348	Electronic card file software, data storage, preparation of output documents, printing of research results "Cardfile"		Is included in the installation disk by default
3.	Sets of electrodes and accessories for EMG/ENMG studies			
3.1.	A_3003	Set of electrodes and accessories for EMG studying		Intended to provide only basic EMG/ENMG techniques (see section 2.1). It can be used with any modification .
3.1.1.	A_8320		Multifunctional Cable - 2 pcs.	
3.1.2.	A_8315		Pair Cup Electrodes 2 pcs.	
3.1.3.	A_8316		Pair Flexible Finger-Toe Electrodes	






3.1.4.	A_8319		Pair Alligators Clips – 2 pcs.	
3.1.5.	A_6433		Surface Bar Electrode EB20/10x5	
3.1.6.	A_7362		Square Disposable Electrodes – 1 package (100 pcs.)	
3.1.7.	A_3222		Stimulating Electrode (attachment) SA23	
3.1.8.	A_3223		Stimulating Electrode (attachment) SA10	

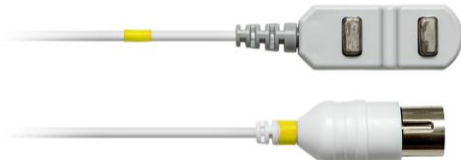


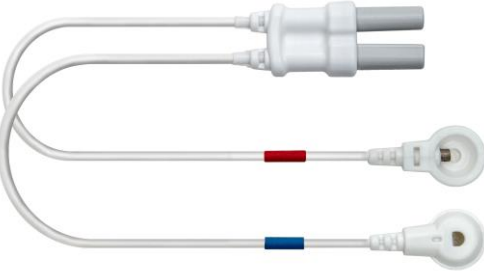
3.1.9.	A_1016		Ribbon set for electrodes fixation	
3.1.10.	A_0610		Measuring Tape	
3.2.	A_3004-1	Set of electrodes and accessories for EMG studying		<p>Intended for techniques included only in the additional set (see section 2.2).</p> <p>It is used for 2-channel modification.</p>
3.2.1.	A_3230		Surface Bar Electrode EB15/D3G green marker	
3.2.2.	A_3246		Surface Bar Electrode EB20/10x5R red marker	


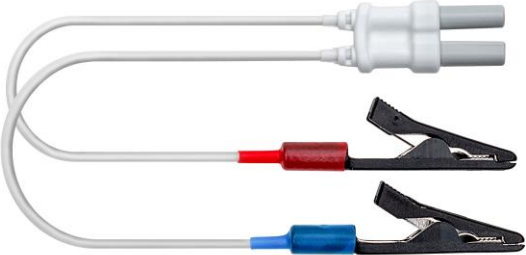
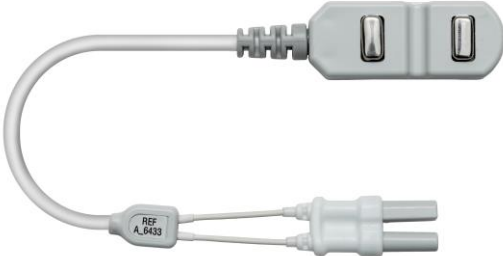


3.2.3.	A_3247		Surface Bar Electrode EB20/10x5B blue marker	
3.2.4.	A_1016		Ribbon set for electrodes fixation	
3.3.	A_3004-2	Set of electrodes and accessories for EMG studying		Intended for 2-channel modification. It is used to provide all EMG/ENMG techniques listed in sections 2.1 and 2.2
3.3.1.	A_8320		Multifunctional Cable - 2 pcs.	
3.3.2.	A_8315		Pair Cup Electrodes – 2 pcs.	







3.3.3.	A_8316		Pair Flexible Finger-Toe Electrodes	
3.3.4.	A_8319		Pair Alligators Clips – 2 pcs.	
3.3.5.	A_6433		Surface Bar Electrode EB20/10x5	
3.3.6.	A_7362		Square Disposable Electrodes – 1 package (100 pcs.)	
3.3.7.	A_3222		Stimulating Electrode (attachment) SA23	






3.3.8.	A_3223		Stimulating Electrode (attachment) SA10	
3.3.9.	A_3230		Surface Bar Electrode EB15/D3G green marker	
3.3.10.	A_3246		Surface Bar Electrode EB20/10x5R red marker	
3.3.11.	A_3247		Surface Bar Electrode EB20/10x5B blue marker	
3.3.12.	A_1016		Ribbon set for electrodes fixation	






3.3.13.	A_0610		Measuring Tape	
3.4.	A_3005-1	Set of electrodes and accessories for EMG studying		<p>Intended for techniques included only in the additional set (see section 2.2).</p> <p>It is used for 4- and 5-channel modifications</p>
3.4.1.	A_3230		Surface Bar Electrode EB15/D3G green marker	
3.4.2.	A_3246		Surface Bar Electrode EB20/10x5R red marker	
3.4.3.	A_3247		Surface Bar Electrode EB20/10x5B blue marker	
3.4.4.	A_3248		Surface Bar Electrode EB20/10x5W white marker	

3.4.5.	A_3249		Surface Bar Electrode EB20/10x5Y yellow marker	
3.4.6.	A_1016		Ribbon set for electrodes fixation	
3.5.	A_3005-2	Set of electrodes and accessories for EMG studying		Intended for 4- and 5-channel modifications. It is used to provide all EMG/ENMG techniques listed in sections 2.1 and 2.2.
3.5.1.	A_8320		Multifunctional Cable - 2 pcs.	
3.5.2.	A_8315		Pair Cup Electrodes – 2 pcs.	

3.5.3.	A_8316		Pair Flexible Finger-Toe Electrodes	
3.5.4.	A_8319		Pair Alligators Clips – 2 pcs.	
3.5.5.	A_6433		Surface Bar Electrode EB20/10x5	
3.5.6.	A_7362		Square Disposable Electrodes – 1 package (100 pcs.)	
3.5.7.	A_3222		Stimulating Electrode (attachment) SA23	



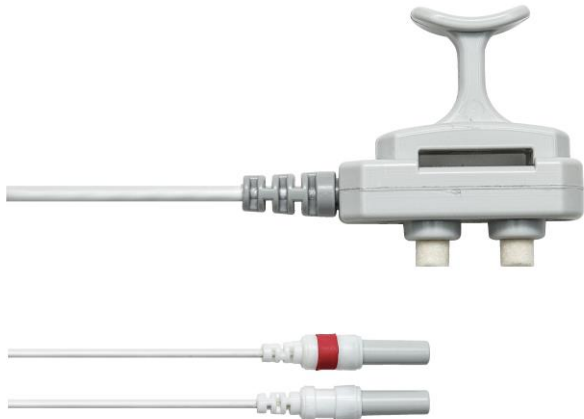
3.5.8.	A_3223		Stimulating Electrode (attachment) SA10	
3.5.9.	A_3230		Surface Bar Electrode EB15/D3G green marker	
3.5.10.	A_3246		Surface Bar Electrode EB20/10x5R red marker	
3.5.11.	A_3247		Surface Bar Electrode EB20/10x5B blue marker	
3.5.12.	A_3248		Surface Bar Electrode EB20/10x5W white marker	
3.5.13.	A_3249		Surface Bar Electrode EB20/10x5Y yellow marker	

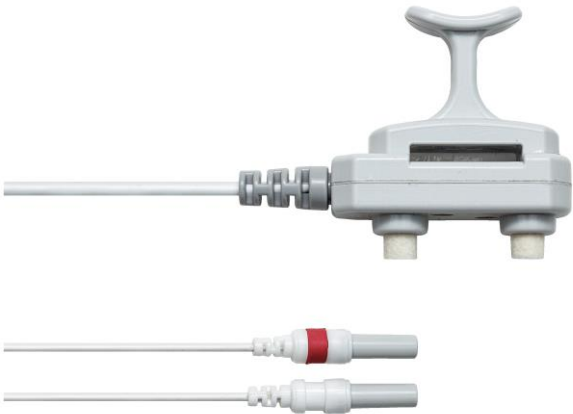



3.5.14.	A_1016		Ribbon set for electrodes fixation	
3.5.15.	A_0610		Measuring Tape	
3.6.	A_3006	A set of electrodes and accessories for needle myography		Intended for all modifications
3.6.1.	A_6084		Disposable concentric needle electrode 37x0,46mm – 50 pcs.	
3.6.2.	A_6083		Disposable concentric needle electrode 50x0,46mm – 25 pcs.	
3.6.3.	A_6086		Shielded cable for disposable concentric needle electrodes – 1 pcs.	

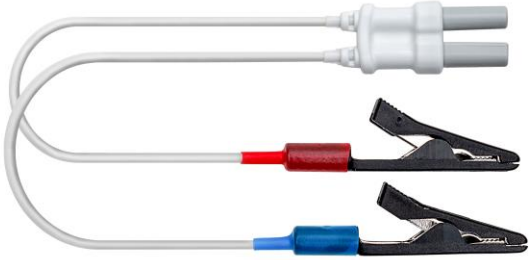


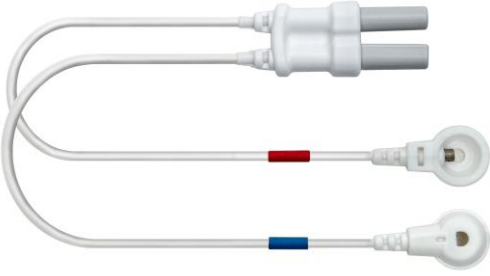

4.	Electrodes and accessories necessary for EP diagnostic techniques (BAEP, MLR, LLR, SEP, LLSEP, FVEP, PRVEP)			
	Set for 2-channel modification			
4.1.	A_3000	Set** of electrodes and accessories for EP studies:		
4.1.1.	A_7873		Cup electrodes – 5 pcs.	
4.1.2.	A_8567		Fixing band for cup electrodes wires	
4.1.3.	A_7848		EP Cable (differential) – 2 pcs.	
4.1.4.	A_8191		EP Cable (2 referential channels) – 2 pcs.	
4.1.5.	A_0343		Brush for electrode cleaning	

4.1.6.	A_3150		Headphones To play auditory EP (tones, beeps, clicks)	
4.1.7.	A_2991		LED Goggles FO-03	
Set for 4- and 5-channel modifications				
4.2.	A_3001	Set** of electrodes and accessories for EP studying:		
4.2.1.	A_7873		Cup electrodes – 9 pcs.	
4.2.2.	A_8567		Fixing band for cup electrodes wires	



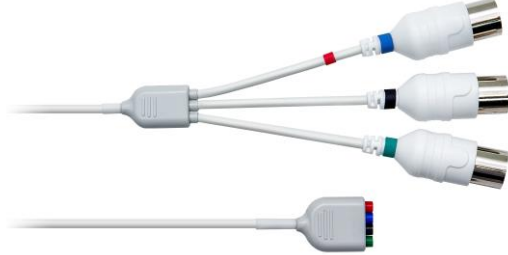



4.2.3.	A_7848		EP Cable (differential) – 3 pcs.	
4.2.4.	A_8191		EP Cable (2 referential channels) – 2 pcs.	
4.2.5.	A_8192		EP Cable (3 referential channels)	
4.2.6.	A_0343		Brush for electrode cleaning	
4.2.7.	A_3150		Headphones To play auditory EP (tones, beeps, clicks)	The purchased product, approved for use in the Russian Federation, is supplied according to the Customer's specification or is purchased by the Customer independently

4.2.8.	A_2991		LED Goggles FO-03	
5.	Electrodes and accessories for EP and EMG studies for additional techniques			
5.1.	A_6335		Stimulating bar electrode SH23/D7 (with handle)	
5.2.	A_3244		Stimulating bar electrode ESS-15/F6 with felt pads	


5.3.	A_3245		Stimulating bar electrode ESS-23/F6 with felt pads	
5.4.	A_1517		Felts duplicate set, 20 pcs.	
5.5.	A_8321		Universal Stimulation Cable	
5.6.	A_8320		Multifunctional Cable	


5.7.	A_8319		Pair Alligators Clips	
5.8.	A_6433		Surface Bar Electrode EB20/10x5	
5.9.	A_7362		Square Disposable Electrodes – 1 package (100 pcs.)	
5.10.	A_8315		Pair Cup Electrodes	
5.11.	A_8316		Pair Flexible Finger-Toe Electrodes	

5.12.	A_4822		Snap Connector Wire (for grounding electrode)	
5.13.	A_5223		Grounding Strap Electrode (for children)	
5.14.	A_2936		Grounding Strap Electrode (small) 2 pcs.	
5.15.	A_2937		Grounding Strap Electrode (medium) 2 pcs.	
5.16.	A_5222		Grounding Strap Electrode (large)	

5.17.	A_7848		EP Cable (differential)	
5.18.	A_8191		EP Cable (2 referential channels)	
5.19.	A_8192		EP Cable (3 referential channels)	
5.20.	A_7873		Cup electrode	
5.21.	A_8567		Fixing band for cup electrodes wires	
5.22.	A_3246		Surface Bar Electrode EB20/10x5R red marker	

5.23.	A_3247		Surface Bar Electrode EB20/10x5B blue marker	
5.24.	A_3248		Surface Bar Electrode EB20/10x5W white marker	
5.25.	A_3249		Surface Bar Electrode EB20/10x5Y yellow marker	
5.26.	A_3230		Surface Bar Electrode EB15/D3G green marker	
5.27.	A_1016		Ribbon set for electrodes fixation	

5.28.	A_0343		Brush for electrode cleaning	
5.29.	A_3222		Stimulating Electrode (attachment) SA23	
5.30.	A_3223		Stimulating Electrode (attachment) SA10	
6.	Required computing equipment			
6.1.	PC System Unit The neuromyoanalyzer software is installed on the computer in accordance with the sales package.			Configurations, characteristics are of informative character and are being specified at the time of sales package formation. Minimal approved characteristics: <ul style="list-style-type: none"> • Intel Core i5 processor; • 8 GB RAM; • SSD 500 GB; • 3 USB ports; • HDMI connector; • LCD monitor –14" and larger; • Windows 10 OS.
6.1.1.			Stationary PC includes: <ul style="list-style-type: none"> • a PC system unit • a keyboard; • mouse; • primary monitor. 	

6.1.2.			A laptop instead of a stationary PC, if required by the customer	If the Customer wishes to choose an improved computing equipment for the neuromyoanalyzer, it is mandatory to inform the supplier about this and coordinate the characteristics of the computing equipment with the manufacturer
6.2.	Additional accessories			
6.2.1.	A_4319	SW MS Office RUS		
6.2.2.	A_2604	Laptop transport bag		
6.3.	A_0687	An additional 23.6" monitor Required for the study of visual EP by the reversible chess pattern (RP-VEP)		Monitor Characteristics: <ul style="list-style-type: none"> • size - over 23" • resolution – at least 1920x1080
6.3.1.	A_7134	Videostimulus Synchronization Sensor (for Pattern Reversal Visual Evoked Potentials)		Required for the study of visual EP by the reversible chess pattern (RP-VEP)

**	Please Note! Following items necessary for work are not included in sales package and should be purchased locally:			
A_3154			Infra-red thermometer	
A_1854			Electrode gel	
A_2669			Adhesive Paste	
A_1523			Abrasive Paste	