# Vision Monitor MonPackONE system

- Electro-retinography (ERG)
- Visual evoked potentials (VEP)
- Electro-oculography (EOG)



Manufactured by Metrovision ISO 13485: 2016 certified quality system METROVISION

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### **Flash ERGs**

Evaluation of responses from the different layers of the retina and from the rod and cone systems.

Realization of ISCEV protocols and of research protocols.



## **Pattern ERGs**

Evaluation of responses from ganglion cells and from the macula.





### **Multifocal ERGs**

Realization of a detailed and objective cartography of the electrical activity of the retina.

Unique features:

- high luminance stimulation,
- precise control of stimulation timing,
- large field refractive lenses,
- age corrected normative database,
- ring ratio analysis





MfERG in hydroxychloroquine intoxication showing a reduction of amplitude between 2 and 5 degrees of eccentricity.



### Flash and pattern VEPs

Evaluation of cortical responses to flash and pattern stimulations.



Unique features:

- Active control of luminance
- Statistical analysis of the reliability o responses



Principle of the active control of luminance





Response to a pattern on-off stimulation

### **Sensory EOG**

Evaluation of responses from the pigment epithelium.

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### Fixation control and video imaging

MonPackONE is equipped with a near-infrared camera for near vision tests (30 cm).

A second camera is proposed as an option for distance tests (1 m).

Another option allows the video recording of exams and of eye movements that may be used for a postexam analysis of responses.

HVM-camera



### **Examinations and options**

### Vision electrophysiology exams

- Flash and pattern ERG and VEP exam
- Sensory EOG exam
- Multifocal ERG and VEP exam
- Sweep VEP exam
- Multifrequency VEP exam
- Portable flash stimulator for children HVM-Mon and patient in lying position

### Options

- Electric table
- Additional camera for distance tests
- Set of large field refractive lenses
- High speed camera (200Hz) Red filter and red illumination kit
- Video and eye movement recording
- (during electrophysiology exams)

### Vision psychophysic exams

PVM-EL	•	Contrast sensitivity exam	PVM-SC
PVM-ES	•	Dark adaptometry exam (dark adaptometry and FST)	PVM-AO
PVM-MU		Viual aptitude exam	PVM-AC
PVM-SS		(Landolt rings, ETDRS, glare test, color test)	
PVM-ST	•	Visual field exam (automated static perimetry)	PVM-CV
HVM-MonBaby		Visual field PRO exam	PVM-CW
		(Goldmann, Blue/Yellow & Motion perimetry)	
	•	Attention visual field exam	PVM-UF
	•	Macular pigments exam	PVM-PI
	•	Metamorphopsia exam	PVM-ME
HVM-TABLE			
HVM-CAMERA HVM-OPTI	Eye	e movement exams	
HVM-camera-200	•	Electro-nystagmography exam	PVM-EO
HVM-red filter	•	Video-oculography exam	PVM-YE
PVM-CF	•	Pupillometry exam	PVM-PU
		Coon moth analysis around	DVACA

PVM-EN

Baby vision exam



### MonPackONE stimulator

Compact and universal stimulator:

- Includes ganzfeld, pattern and multifocal stimulations
- Active control of luminance
- White, combinations of blue 465nm, green 525nm, red 619nm
- Maximum flash strength = 40 cd.s.m<sup>-2</sup>
- Dynamic range = 70 dB (steps of 0.5 dB)
- Eye-screen distance = 30 cm and up

# **Bioelectric amplifiers**

- 2, 4 or 5 channels
- High performances

   (input noise < 0.5 μV pp, CMRR > 115 dB, input impedance=1000 Gohms //220pF)
- Optoelectronic isolation
- Automated control of electrode impedances

### Correction of refractive errors

A set a large field lenses (55 mm in diameter) prevents errors resulting from the lens rim or lens misalignment in multifocal ERG exams





### User interface

- Standard PC with Windows 11 environment
- Access to results through the computer network
- Easy exportation of data
- Video monitoring window
- Single data base for all exams
- Internet assistance and maintenance
- DICOM option

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