

GRAS 45CA KUULOSUOJAIMIEN TESTAUSJIGI

ISO: 4869-3 ja IEC: 60318-1 and 60318-4 standardien mukainen riippuen konfiguraatiosta



MSP_VIRTUEMA GRAS
RT_MANUFACTURER

MSP_VIRTUEMA 45CA
RT_SKU:

Introduction

GRAS 45CA provides the basis for reliable and exact measurements and is designed with

- A test fixture mounted on a resilient base that reduces the noise floor to a minimum in a typical test situation. Foam plugs and grease are supplied to avoid sound leakage along the cable
- A test fixture head, made for optimizing the acoustic isolation
- An acoustic cup and plug for testing the acoustic isolation
- A range of moulded-rubber KEMAR pinnae, e.g. for testing ear plugs, can be fitted

The 45CA's robust design is ideally suited for binaural testing of active and passive earplugs, as well as circumaural hearing protectors.

It is primarily intended for testing the performance of hearing-protection devices such as ear plugs and ear muffs (supra-aural and circum-aural) but can also be used for testing sound sources such as earphones and headphones. It is fitted with either microphones or ear simulators, depending on the device to test and the standard to comply with.

Compliance with ISO 4869-3, IEC 60318-1 and IEC 60318-4 assures technicians, decision makers, and authorities of repeatability and transparent data when developing and verifying hearing protectors.

The pinnae for the 45CA are basically the same as the standardized KEMAR pinnae, but rounded to fit the large 45CA base plate. This large base plate reduces or eliminates the risk of leakage.

The 45CA includes two plugs for measuring the acoustic isolation in a closed ear.



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www.youtube.com/channel/UCpKEF_7bS4dMC4qPokUAgDQ

MSP_VIRTUEMART_PRODDOCS

1. [Esite](http://www.mip.fi/images/docs/fi/gras_45ca.pdf), (URL: http://www.mip.fi/images/docs/fi/gras_45ca.pdf)

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Standard		ISO 4869-3 *	IEC 60318	IEC 60711
Test Setup (G.R.A.S. equipment to use)		Pressure Microphone – 1" 40EN or – ½" 40AP/40AD	Ear Simulator RA0039 with ½" microphone: – 40AG (ext. pol.) or – 40AO (pre-pol.)	Ear Simulator – RA0045 (ext. pol.) or – RA0045-S1 (pre-pol.)
Device to test	Ear muffs	+	+	+
	Earplugs	-	-	+
	Headphones	+	+	+
	Earphones	-	-	+
	Hearing-aids	-	-	+

Table 1 Providing an overview: Which configuration to use



<https://www.youtube.com/watch?v=MqdGI5idJ74>



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