

## INTISARI

### ANALISA PENGUJIAN *REPEATABILITY* TIMBANGAN ELEKTRONIK DENGAN METODE SYARAT TEKNIS TIMBANGAN NON OTOMATIS DAN METODE NMI AUSTRALIA

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Telah dilakukan penelitian tentang analisa pengujian *repeatability* timbangan elektronik dengan metode syarat teknis timbangan non otomatis dan metode NMI Australia. Penelitian ini dilatarbelakangi oleh pengujian *repeat* timbangan elektronik dengan metode syarat teknis timbangan non otomatis yang selama ini terbilang lama apabila tidak menggunakan kalkulator ataupun komputer. Tujuan dari penelitian ini adalah membandingkan metode pengujian *repeatability* timbangan elektronik menggunakan metode sesuai syarat teknis timbangan bukan otomatis dan metode NMI Australia yang keduanya mengacu pada OIML R76 dalam penentuan sah ataupun batalnya pengujian *repeatability* timbangan elektronik.

Metode penelitian ini dilakukan melalui pengujian *repeat* pada 3 sampel timbangan elektronik, kemudian pada masing-masing timbangan elektronik dilakukan 2 metode pengujian. Sampel timbangan yang digunakan pada penelitian ini adalah timbangan kelas II merk AND model GX-10K maksimum penimbangan 10kg dengan  $e = 0.1g$  dan  $d = 0.01g$  milik Balai Metrologi Yogyakarta dan dua timbangan lainnya timbangan kelas III sampel acak timbangan yang berada di pasaran. Masing-masing bermerk Camry dengan model EK3250 dan model EK3651 dengan maksimum penimbangan 5kg dan  $e = 1g$ .

Kesimpulan dari penelitian yang telah dilakukan bahwa pengujian ketidaktetapan (*repeatability*) timbangan elektronik menggunakan metode syarat teknis timbangan bukan otomatis dan metode NMI Australia terdapat beberapa perbedaan meskipun keduanya mengacu pada OIML R76. Perbedaan tersebut meliputi beberapa poin yaitu muatan yang digunakan, metode penambahan imbuh, rumus penentuan *repeat* timbangan elektronik, serta hasil pengujian yang berbeda. Metode NMI Australia dianggap akan memudahkan dan lebih mempersingkat waktu dibandingkan dengan metode syarat teknis timbangan bukan otomatis.

**Kata kunci :** ketidaktetapan, *repeatability*, pengujian *repeat*

## ABSTRACT

### ***THE ANALYSIS OF REPEATABILITY TEST ELECTRONIC SCALES BY THE TECHNICAL REQUIREMENTS NON AUTOMATIC SCALE METHOD AND NMI AUSTRALIA METHOD***

by

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*The research on the analysis of test repeatability electronic scales with the technical requirements of the methods of non automatic scales and methods NMI Australia has been done. This research was motivated by repeat testing of electronic scales with the technical requirements of the methods of non automatic scales that have been quite a long time when did not use calculator or computer. The purpose of this research was to compare the test methods repeatability of electronic scales using the method according to the technical requirements non-automatic weighing instruments and Australian NMI methods which both of them were refers to OIML R76 in the determination of legitimate or cancellation of repeatability testing of electronic scales.*

*The research method was conducted through repeat testing in the third sample electronic scales, then on each of scale do the two testing methods. Sample weights were used in this study were class II scales brands AND GX-10K, which has maximum weighing 10kg with  $e = 0.1g$  and  $d = 0.01g$  belongs to Yogyakarta Metrology Center and two other scales weighing scales class III were random samples on the public community. The weighing scales class III each branded Camry model EK3250 and EK3651 with a maximum weighing 5kg and  $e = 1g$ .*

*The research can be concluded that the repeatability test of electronic scales scales using technical terms was not automatic and Australian NMI methods there are differences even though both of two method are refers to OIML R76. The difference include several points that the load used, the method of adding added, repeat the determination formula electronic scales, as well as the test results was different. Australian NMI methods considered gave facilitate and shorten the time than the method of the technical requirements of not automatic scales.*

**Keywords :** *repeat, repeatability, repeatability test*