

**Aim of the study.** Systematization of data about the methods and techniques for determining the ototoxicity of the drug by advanced bibliographic study.

**Materials and methods.** 167 abstracts and scientific articles from the Cochrane Electronic Library and the MEDLINE database.

**Results.** The bibliographic study highlighted three basic primary approaches in the monitoring of drug ototoxicity (87% of sources): conventional audiometry, high frequency audiometry and ototacoustic emissions. Another technique (present in about 13% of the investigated materials), such as the auditory brain response, can be used for a particular patient, but it is not a standard monitoring technique, although it can also be a criteria for detecting changes in auditory system.

**Conclusions.** A variety of methods exist for monitoring ototoxicity of drug substances in the local therapy of auricular pathologies. Some are designed either for the early detection of ototoxicity and some in a simple evaluation for obtaining additional information about ototoxic changes and its site of lesion.

**Key words:** ototoxicity, monitoring, methods, drug substances

### **376. THE EVALUATION OF SOME TECHNIQUES OF THERMAL ANALYSIS AT THE PREFORMULATION STAGE OF COMBINED DRUGS**

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**Introduction.** Thermal analysis includes several analysis techniques, which measure an analytical signal of the sample at a certain temperature. The analysis is based on thermogravimetric curves. The instrument used in thermal analysis consists of a microbalance surrounded by a electrically heated furnace equipped with a thermocouple to monitor the temperature.

**Aim of the study.** is to assess the use of thermo-gravimetric and differential scanning calorimetry methods at the preformulation stage of combined drugs.

**Materials and methods.** Electronic databases: Medline, Cochrane, Embase and Springer. Also, the search was conducted by using printed, pharmaceutical and chemical journals. It was analyzed 150 bibliographic sources.

**Results.** In most of the researches (45%), thermogravimetric analysis was used in order to determine the decomposition temperature of the individual active substances and also from the mixtures of active substances with excipients or with other active substances. Also, most frequently (53.3%), thermogravimetric analysis has been combined with other techniques such as: differential scanning calorimetry. Less researches (1.7%) applied thermogravimetric method to determine water content and volatile substances.

**Conclusions.** Thermogravimetry and differential scanning calorimetry are physico-chemical methods which are widely used for compatibility research of active substances and excipients at the preformulation stage of drugs.

**Key words:** thermogravimetry, preformulation, combined drugs

### **377. APPLICATION OF IR SPECTROSCOPY FOR EVALUATION OF COMPATIBILITY OF DRUG SUBSTANCES WITH EXCIPIENTS**

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