

213. Title: Application of Terahertz Absorption Spectroscopy to Evaluation of Aging Variation of Medicine

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Abstract: The absorption spectra of three kinds of medicines both before and after the expiration date: Amlodin OD (R) (5 mg), Basen OD (R) (0.2 mg) and Gaster D (R) (10 mg) have been measured by terahertz time domain spectroscopy (THz-TDS). All the medicines show some differences in the THz absorption spectra between medicines before and after the expiration dates. X-Ray powder diffraction (XRD) studies of all medicines suggest that the polymorph of the main effective compound is not changed before and after the expiration date. Therefore, the differences in the THz spectra between medicines before and after the expiration dates arise from aging variation of diluting agents and/or from modifications of intermolecular interaction between the effective compounds and diluting agents.