

ABSTRACT

TÁBORSKÁ, Z. New ligands for magnetic resonance imaging; pH-sensitive probes. Prague: Charles University in Prague, Faculty of Science, Department of Inorganic Chemistry, 2011, 32 pages. Supervisor: doc. RNDr. Kotek J., Ph.D.

Magnetic resonance imaging is a modern method used in diagnostic for assessing morphology and pathology of soft tissues. This thesis briefly outlines the principles of magnetic resonance imaging, including instrumentation.

In many cases intravenously administered contrast agents are used, which are used for diagnostic purposes. At present, the most applied are CAs based on Gd(III) complexes.

The experimental part of the thesis is focused on preparation of a derivative of DTPA with aminomethylphosphinate pendant group for using as a potential ligand for CAs for the magnetic resonance imaging.

KEYWORDS:

magnetic resonance imaging, contrast agents, lanthanides, phosphinates