SYNTHESIS, CRYSTALLOGRAPHIC CHARACTERIZATION AND MAGNETIC PROPERTIES OF THE NEW DINUCLEAR IRON(III) COMPLEX $\text{Fe}_2\text{L(OCH}_3\text{)Cl}_2$ ($\text{L}$=$\text{1,3-bis[N-(3,5-dichloro-2-hydroxybenzylidene)-2-aminoethyl]-2-(3,5-dichloro-2-hydroxyphenyl)imidazolidine}$) ARE REPORTED. THE STRUCTURE CONSISTS OF DINUCLEAR UNITS. THE TWO IRON(III) ATOMS ARE ASYMMETRICALLY BRIDGED BY A PHENOXO AND A METHOXO GROUP. THE IRON(III) CENTERS ARE SEPARATED BY 3.133(2) Å. THE MAGNETIC SUSCEPTIBILITY OF THE COMPLEX WAS MEASURED OVER THE RANGE 5 – 298 K AND THE OBSERVED DATA WERE SUCCESSFULLY SIMULATED BY THE EQUATION BASED ON THE SPIN-HAMILTONIAN OPERATOR $H = -J \vec{S}_1 \cdot \vec{S}_2$. MAGNETIC SUSCEPTIBILITY MEASUREMENTS INDICATE VERY WEAK ANTIFERROMAGNETIC COUPLING BETWEEN THE IRON IONS WITH $J = -10.8 \text{ cm}^{-1}$ AND $g = 2.0$.

KEY WORDS: DINUCLEAR IRON(III) COMPLEX, SUPER-EXCHANGE INTERACTIONS, ANTIFERROMAGNETIC COUPLING, SCHIFF BASE, IMIDAZOLIDINE