Methyl bromide, CH3Br, is the most abundant long-lived bromocarbon in the troposphere and it is a potential greenhouse gas and ozone depleting compound. Due to the environmental problems numerous spectroscopic and theoretical studies have been carried out for the parent molecule, whereas minor attention has been devoted to its partial deuterated forms CH2DBr and CHD2Br due to their very low concentration in the Earth’s atmosphere. High-resolution infrared data of these molecules lead to accurate spectroscopic parameters which are useful for improving calculations of the general harmonic force field and the *ab initio* potential energy surfaces of CH3Br. For this reason, we have extended the study of the high-resolution FTIR spectra of the di-deuterated species CHD2Br in a spectral region never previously investigated.