Abstract
Colour is an individual visual perception that is dependent upon numerous factors. Colour cannot be measured directly unlike the mass of a body or its geometric characteristics (length, width, height). Using the key elements in the complex system of viewing/rendering/reproducing colour, which involves: the source of light, the coloured object, the observer (receiver), the paper presents the importance and standard of each component, highlighting the specifics of colour assessment, for additive and subtractive systems, including the particular steps of the direct RGB model and the opposite CMYK model. Based on preliminary complex mathematically processed data, the paper presents the algorithm for developing and structuring the various colour spaces that serve to represent colours: LMS, RGB, CIEXYZ, CIExy, CIELab – which has become a universal space that encompasses lightness L and two chromatic components, i.e. a - the green to magenta range and b – the blue to yellow, CIELuv – recommended for its uniformity, and HSB (hue, saturation, brightness) – typically used for dependent systems, etc. The paper emphasises the particular characteristics and gamut of each colour model. The variants CIEDE 1976, CIEDE 1994, CIEDE 2000 used in calculating colour difference are also provided. Moreover, an analysis of colour evaluation criteria is presented and, based on the conclusions, the adequate representation space is recommended. The author's personal contribution is limited to the colour spaces for three types of soil under humidity conditions; three types of leaves and grass, four types of gladioli and the colour of the red cabbage extract in connection with pH – which are all characterised by natural colour.

Key words: water, field, spaces, electromagnetic spectrum, spaces