

High throughput hyperspectral system for algae identification.

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1. ABSTRACT

We present efficient hyperspectral imaging tool¹ for fast identification of algae's and their content². This instrument uses pushbroom hyperspectral system mounted on commercial upright optical microscope (Olympus BX-50). Algae's are freely diluted in media and naturally followed liquid flow made by syringe pump in specially designed microfluidic chamber. Obtained hyperspectral image sets are evaluated by knowledge base of algae's spectral information and processed by intelligent computer procedure³. We are able to distinguish between different types of algae's and analyzed their content. We hope that portability and user friendly operation of instrument will be useful in many areas of algae's identification and cell biology as well.

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3. REFERENCES

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