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Vážená paní  
**Veronika Záchová**  
ELI Beamlines  
Průmyslová 836  
25241 Dolní Břežany  
Česká republika

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## The Duetta™

A new bench-top instrument and a new concept  
for analytical molecular spectroscopy.

### KEY FEATURES

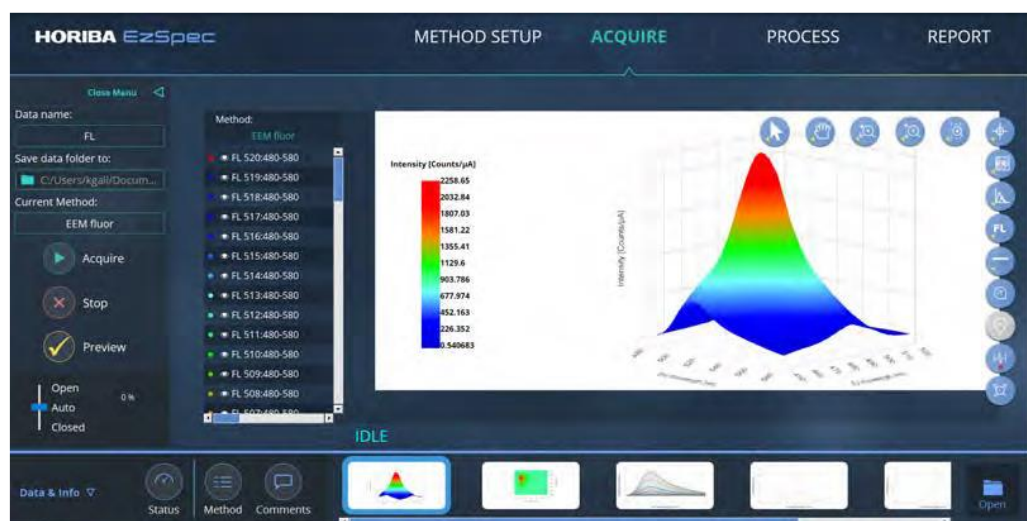
- Two-in-one **Fluorescence and Absorbance** Spectrometer
- **UV-Vis-NIR** Fluorescence Detection Wavelength Range from 250 to 1,100 nm
- Full 3-D Fluorescence **EEM** Acquisition in Less Than One Second
- Best in Class Fluorescence Sensitivity Specification of **6,000:1 RMS** for Water Raman
- **Automatic Correction for Primary and Secondary Inner Filter Effects (IFE)**
- High Fidelity Molecular Fingerprinting with Unique **A-TEEM™** (Absorbance-Transmittance Excitation Emission Matrix) Technology
- Millisecond **CCD Detection** of Entire Fluorescence Spectrum



The **Duetta™** two-in-one system eliminates the need for multiple scanning instruments. In addition to traditional fluorescence and absorbance spectroscopy modalities, the new system features simultaneous Absorbance-Transmittance Fluorescence Excitation Emission Matrices (A-TEEM) providing better molecular fingerprinting and extended dynamic range due to automatic inner filter effect corrections.

**Its main benefits are:**

- The table-top Duetta™ can be used as a fluorometer, as a UV-Vis-NIR spectrometer to measure absorbance, or as an instrument that measures true molecular fingerprints, which require the acquisition of fluorescence and absorbance, correcting for IFE in real time.
- **Fluorescence in the Blink of an Eye!** Duetta™'s ultra-fast, state-of-the-art CCD technology allows it to outperform, by orders of magnitude, any competitor using PMTs. It's the fastest bench-top fluorometer in the world, and the only fluorometer that can acquire a full spectrum in less than 100 milliseconds! As a consequence, the Duetta™ **eliminates sample aging, bleaching and dilution issues** as experimental variables. This state-of-the-art CCD technology also extends NIR wavelength detection to 1,100 nm, well beyond the limit of a standard PMT fluorometer.
- **Highest Fluorescence Sensitivity in its Class.** Having the highest level of fluorescence sensitivity means that Duetta™'s optimized design lets you measure lower concentrations of a sample and provides better quality data.
- **Fully automated** platform.
- Including fully **Automated Order Sorting Filters:** Duetta™ includes excitation and emission cut-off filters for automated elimination of second order grating effects, which otherwise interfere with the fluorescence signal of interest.
- **Absolute Fluorescence Spectra with Real Time Inner Filter Effect (IFE) Correction.** IFE limits the linearity of the fluorescence signal at higher sample concentrations due to primary and secondary re-absorption of fluorescence. Duetta™'s unique design applies real time IFE correction **to obtain absolute fluorescence spectra at higher sample concentrations.**
- **EzSpec™** Touch-Screen Software: HORIBA debuts Duetta™'s new generation software interface with **touch-screen utility**, and **a selection of Apps** for routine analysis:
  - o Autonomous Acquisition
  - o Pass/Fail
  - o Build/Use a Concentration Curve
  - o Protein A280
  - o And more and more to come: RNA/DNA Purity A260/280, concentration from Absorbance, FRET, Ion Kinetics, CIE Colorimetry, Enzyme Kinetics...



- **EzSpec™** offers the **widest Range** of Spectroscopic **Acquisition Modes**:
  - Fluorescence emission spectra plus Abs & IFE\*
  - Fluorescence excitation spectra plus Abs & IFE\*
  - Capture fluorescence value plus Abs & IFE\*
  - Fluorescence EEM plus Abs & IFE\*
  - Fluorescence kinetics (emission spectra\* or single point intensities)
  - Absorbance and % Transmittance (spectra or kinetics)
  - \*Unique to Duetta™
  
- **Smart Sample Accessory Trays**: switching from one type of sample holder to another could not be easier. Without any tools or cables, Duetta™'s spill-proof sample accessory trays are **identified by EzSpec™** software, enable electrical power for the appropriate module (e.g. 4-position Peltier holder), and read an enabled sensor (e.g. temperature), if available. **Optional sample holder trays available**:
  - Thermostated and Micro-Stirred Cuvette Sample Tray: self-identifying thermostatable, water jacketed cuvette holder (1 cm) with magnetic micro-stir motor. Requires, but does not include, external water bath.
  - Single Cuvette Peltier Holder Sample Tray: self-identifying single cuvette Peltier holder (1 cm) for automated temperature control and ramping from -15 °C to +105 °C, with magnetic micro-stirrer. Includes external water circulator for heat sink.
  - Four Position Peltier Cuvette Sample Tray: self-identifying four position Peltier holder (1 cm) for automated temperature control and ramping from -15 °C to +110 °C, with magnetic micro-stirrers under all four positions. Includes external water circulator for heat sink.
  - Universal Variable Angle Sample Tray: self-identifying sample holder with 360 degree variable angle goniometer for empirical determination of optimum sample angle. Requires, but does not include, solid sample holder accessory, powder sample holder accessory or cuvette holder accessory.
  
- **Easy Lamp Replacement**: lamp cartridges are pre-aligned at the factory, guaranteeing perfect alignment upon snap-in replacement. **No tools or service are required.**
  
- **Each instrument offers a standard 12-month warranty.** It is fully comprehensive and covers parts, labor, and expenses.



DUETTA		
Ref.	Description	Price €
<b>Main Systems</b>		
Duetta	Duetta Simultaneous EEM Fluorescence and UV-Vis-NIR Spectrophotometer. This two-in-one patented A-TEEM spectrometer includes a LampSnap ozone-free xenon lamp illuminator delivering excitation light from 230nm to the NIR. Selection of the excitation wavelength is performed by the excitation monochromator with motorized adjustable slits (1, 2, 3, 5, 10 & 20nm). Comes with excitation filter wheel with two order sorting longpass filters and two neutral density filters (0.5 and 1.0 OD). Delivered with a photodiode reference detector and with a CCD detector for the detection of the fluorescence signal up to the NIR (250 to 1,100nm). The CCD is mounted on a spectrograph that includes software-controlled adjustable slits (1, 2, 3, 5, 10 & 20nm) for the selection of the bandpass at the emission channel. The instrument is delivered with a standard cuvette holder and a quartz cuvette. Our intuitive, interactive and touch-screen EzSpec software comes for the full control of the instrument and for all classical fluorescence acquisitions: excitation, emission and 3D fluorescence spectra, time-based acquisitions, ..., absorption spectra, and other predefined application modules. Requires but does not include laptop or PC.	24 700
SampleSnap-WJ	Self-identifying thermostatable, water jacketed cuvette holder (1 cm) with magnetic micro-stir motor. Sample tray can be installed in seconds without need of a tool and provides power for micro-stirrer. Requires but does not include external water bath.	4 200
	Packing, shipping and insurance	750
	<b>Total €, VAT excl.</b>	<b>29 650</b>
	VAT 21%	6 227
	Total € VAT incl.	35 877

#### **PRODEJNÍ PODMÍNKY:**

<u>Cena:</u>	Pro dodávku z Francie v EUR, bez DPH
<u>Dodací doba:</u>	Do 3 – 4 měsíců od potvrzení objednávky
<u>Instalace:</u>	<b>bez instalace a školení (Plug&amp;Play)</b>
<u>Výrobce:</u>	HORIBA Scientific
<u>Garance:</u>	<b>12 měsíců</b> od data dodání. Předmětem záruky není spotřební materiál (skleněné výrobky, kyvety, osvětlovací výbojka apod.)
<u>Platební podmínky:</u>	100% po dodání a protokolárním převzetí na základě faktury. Splatnost faktury 30 dnů, na účet firmy Specion s.r.o., bankovním převodem. Nebo jinak dle dohody.
<u>Platnost nabídky:</u>	2 měsíce

#### Zpracoval:

Ing. Jan Tkáč  
SPECION s.r.o.  
Budějovická 1999/55, 140 00 Praha 4  
www.specion.biz  
Tel: +420 602 302 542,  
e-mail: tkac@specion.biz

  
**SPECION s.r.o.**  
Budějovická 1998/55  
140 00 Praha 4  
IČ:48112836 DIČ:CZ48112836