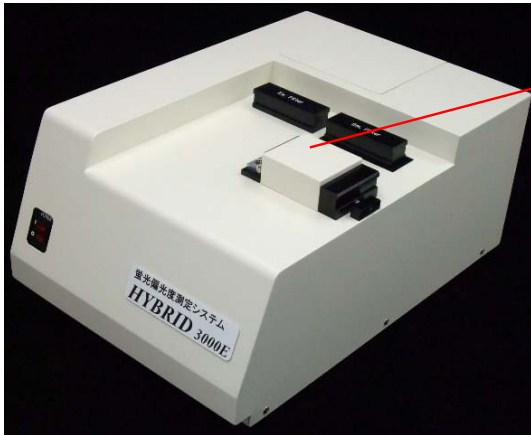


Photoscience

Fluorescent Polarization Measurement System

HYBRID-3000E



■ Temperature controlled sample compartment



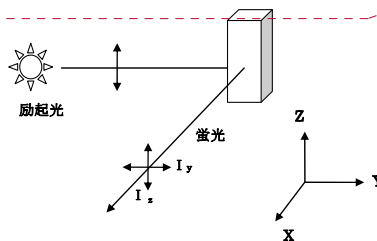
■ Small capacity (100µl) test tube

Fluorescence anisotropy is an excellent technique for the analysis of large molecules by measuring the effects of molecular size on the speed of rotation caused by Brownian movement – as the molecular size increases the speed of rotation becomes slower.

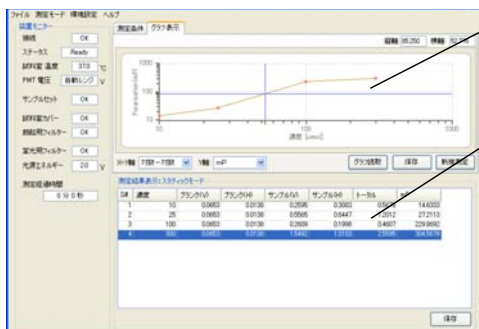
Fluorescence polarization P is calculated by irradiating the sample with polarized light (excitation) and measuring the emitted light polarized as a vertical fluorescence component I_z and horizontal fluorescence component I_y as shown in the formula (right). For small molecules where the rotation speed is faster, the I_y polarized component becomes larger and the degree of polarization P smaller. Conversely, for larger molecules with slower rotation speed the I_y polarized component becomes smaller and the degree of polarization P larger.

Using fluorescence anisotropy the interactions for a wide range of biological molecules can be measured, for example; complex formation, dissociation, disassembly and change in higher-order structure. It is possible to obtain significant information in real time by observing the degree of fluorescent polarization P.

$$P = (I_z - I_y) / (I_z + I_y)$$



コメントの追加 [S11]: Pay very close attention to the technical translation as the original doesn't seem to be correct
 この部分ですが、訳者から特に注意してほしいと上記コメントありますので、特に注意してチェックをお願いします。



■ Example of measurement results display

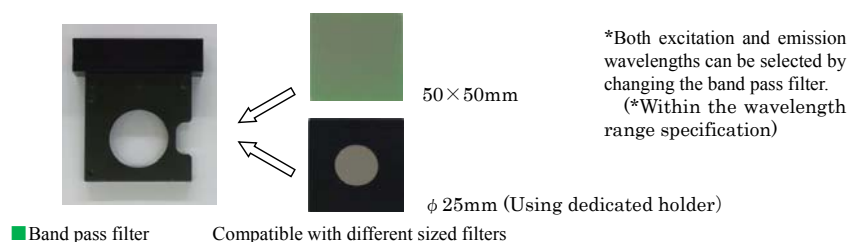
- Graph display area
The measured results are displayed graphically in real time. Data is also displayed as sigmoid curve.
- Numeric data display area
All important numerical data are displayed in real time.
 - Concentration
 - Blank result (H, V)
 - Sample result (H, V)
 - Total result
 - Degree of fluorescence polarization mP

[Features]

- Rapid and high sensitivity measurement of the interaction of biological samples (using a revolutionary new polarization system)
- Small sample volume required (100 μ l)
- One PC controls both measurement and data processing.

[Use]

- High sensitivity measurement of the interaction between biological molecules.
For example: Antigen/antibody, ligand/receptor and DNA hybridization etc.



Main specifications	HYBRID-3000E	※Product specifications are subject to change without notice.
Wavelength range	360~700nm	
Excitation wavelength(standard)	480nm (the wavelength can be selected by changing the filter)	
Emission wavelength (standard)	530nm (the wavelength can be selected by changing the filter)	
Light source	Halogen lamp DC12V, 50W	
Detector	Photomultiplier	
Test tube/Sample volume	φ6×50mm (Single use) / ~ 100 μ l	
Sample temperature control	15°C~60°C	
Measurement mode	① Static mode, ②Kinetic mode, ③Fluorescent intensity monitor	
Control and data processing	PC (with USB) / OS: Windows®7, Windows®XP (32bit)	
Dimensions	Main instrument 295(W)×430(D)×200(H) *Excluding projections	
Power source and power consumption	AC100V 50/60Hz, 200W (Max)	

<p>Distributor</p>	<p>Manufacturer</p> <p>Photoscience Incorporated</p> <p>1-D Kimura-bldg 492-1 Katakura Hachioji, Tokyo 192-0914, Japan</p> <p>Tel: +81-42-649-1447 Fax: +81-42-649-1455</p> <p>URL http://photoscience.co.jp</p>
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