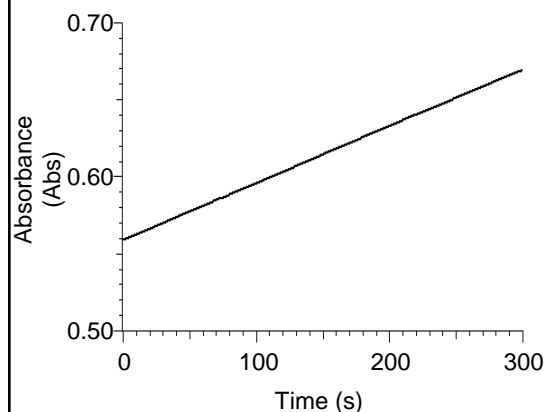


Measurement of Trypsin Enzyme Activity

INTRODUCTION

Trypsin is a kind of digestive enzyme found in pancreas and used for antiproteolytic and amino acid sequence analysis. The enzyme activity is determined based on the change in the absorbance per time unit when an enzyme decomposes a substrate. The larger the change in the absorbance (slope), the higher the enzyme activity. When the activity of a commercially available trypsin was calculated, it was found to be 3700 trypsin unit/mg indicating that the value claimed by the manufacturer (3500 trypsin unit/mg or higher) was satisfied. The activity level can be easily calculated by using the rate calculation function.

METHOD		PREPARATION
Measurement method : Trypsin (from bovine pancreas, Wako Pure Chemical Industries)		Refer to the next page (sheet No. UV090015-02).
Analyte : In accordance with Japanese Pharmacopoeia 15th edition, Crystalline Trypsin for Ulinastatin Assay		
INSTRUMENT CONDITIONS		
Instrument	: U-3900H spectrophotometer	
Scan speed	: 300 nm/min	Change over time
Slit	: 5 nm	Measurement wavelength : 253 nm



Change in Absorbance of Trypsin

Definition of activity: 1 trypsin unit is defined as the amount of enzyme which increases the absorbance (wavelength: 253 nm) by 0.003 per minute at pH 7.6 and 25°C.

Trypsin unit in 1 mg = change in absorbance(60 sec) × K factor *1

*1 : K factor = (0.003 × mg count of trypsin in 0.2 mL of sample solution)

開始時間	<input type="text" value="0.0"/>	s	Set	Kファクタ	<input type="text" value="166666.7"/>			
終了時間	<input type="text" value="60.0"/>	s	Set			<input type="button" value="更新"/>		
開始 (s)	終了 (s)	Kファクタ	傾き	活性度	R	R2		
0.0	60.0	166666.7	0.02227	3704.6	0.99995	0.9999		

Calculation Result of Activity

KEY WORDS

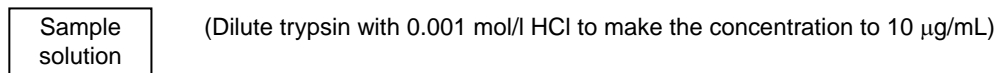
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Spectrophotometer (UV)

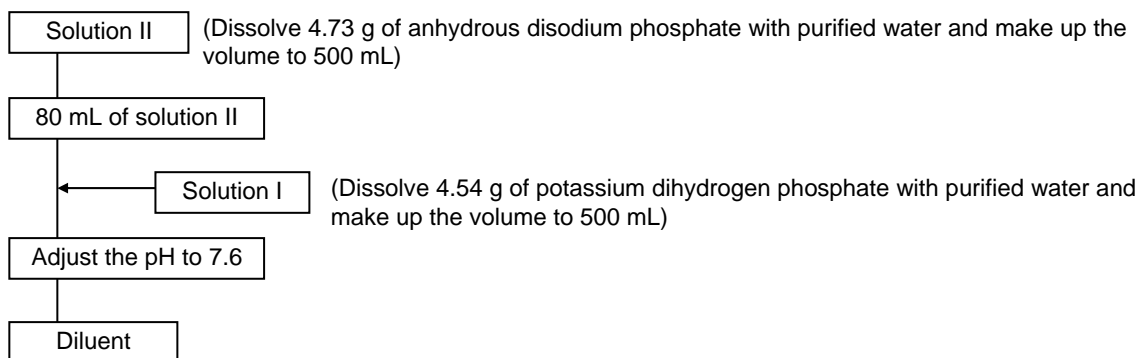
Sheet No. UV090015-01

Pretreatment for Analysis of Trypsin

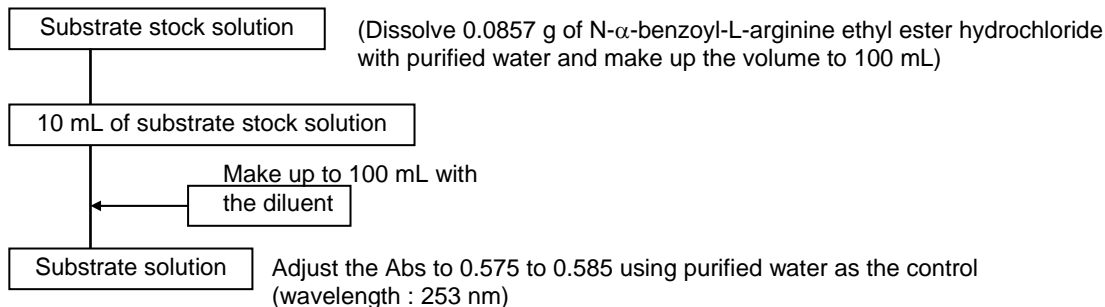
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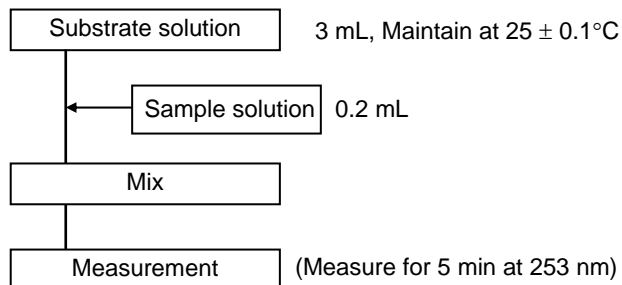
(ii)



(iii)



(iv)



KEY WORDS

Bio·Medical Science·Food·Pharmaceutical, Medicine·Pharmaceutical, Other Bio·Medical Science·Food·Pharmaceutical Related, Trypsin, Enzyme Activity, Absorbance Spectrum, Biochemistry, 10mm Cell, UV, U-2910, U-3900, U-3900H, U-2800, U-3010, U-3310

Spectrophotometer (UV)

Sheet No. UV090015-02