		Buaternary: Containing more than I A: A chain
		Jane to man I A.A chain
29/1	0	ENZYMES
	24	and the second and the second court of the second court
	.0	Emymes are mostly peroteins (with exception of nibosomes)
		which are made up of RNA.
	6	All are globular proteins
	e	Catalysts
	o	Catalyzed reaction is reversible
		Efficient NSME proper
	٥	Nighty specific.
		Enzymes are biological catalyst which enhance the
		nate of biochemical neachon Inom 10° to 16'6 home
		when compared to uncatalyzed reaction.
		MITHUA
300	1 1 2	CHARACTERISTICS OF ENZYMES
	7"	20001
	6	Speed: Upto 1016 times jaster reaction rate
		Specificity. Only the desired reaction occurs. Hence
		high quality products, fewer-by-products
		& purification process becomes much
		eavier.
	•	Permit reachood under mild conditions
·		

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		Activation and		8	tate.		· since		
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ene	rgy	Reactor	nts				ZYME		
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			WITH	-		1:4	- do	hivation	n energy
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	of the space	M T W T F	s s	
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	ENZYME STRUCTURE	1 1 165	Λ.	
	modele was proposed by Emile Fischer	193		
	Enzymes are proteins	112 .		
•	They have a classica who	200		
6	They have a globular shape.		<u> </u>	
	A complex 3-0 Mountine.	- 1414		
	THE ACTUAL CITE			
	THE ACTIVE SITE NAME THE		1.8	
	model was proposed by koobland	of the		
	One part of an engine, the active site	e is po	esticularly	
200	important	14.		
	The shape and the chemical envise	ment	imide the	
	active site permits a chemical our	ction to 1	vioced	
	more early ENTORYH VYDI GIVA DIT			
	COFACTORS	1		
	Pd s	2/		
	An additional non-protein molecule	that is	Meaded	
	by some enjumes to help the reach Highly bound co-factors are can		. H I.	
	Aging bowler co-jacous are car	sed pric	men'c	
	groups			
•	Co Jactors that are bound and rele		ily are	
-W-	Called coensymes.	Tally	/	
•	Many vitamins are called coenze	imes.		
12 21	ods to [5] do journ [63] compare to		1	
June	THE CATALYTIC SITE OF ENZYME			
		al tel		
Sec.			than	
	Usually the size of the enzyme is			
	That of the substructe at les	ant in t	house	
-11	Enzyme binds to substrate at les	his sites		
	different regions called as cataly	a consolite	· 6	
•	Different models were proposed of	rgancum	g now	
	enzigne binds to substrate.			

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	FACTORS AFFECTING ENZYMES A	CTION	*
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3.	Temperature.	been been	1
4.		1	
5.	Effect of product concentriation	7	
60	Effect of achivatoris.		
	Effect of light and radiation		
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	None in the second seco	· Cairias	
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	The substrate.		
	They are the neactants	activated by	the ensume
	Ha Enzymes are specif		
	The specificity is dete		
	Substrate conc: Non-enzym	ic genetions	
	account construction of the second se	11 mm 1	
	71	100	
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	Vilouty	A. W. M T	- 1
63	sulmate conc ->		
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		lead to de	naturah	on of er	zyme.	1
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		lon every is	oc pure	in tem	perature,	ffrees
	2000	speeding.	un the	proces	Maria Contractor	
			U.			

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Date;	70	AVU
The second secon	-	_

· ala	The effect of temperature
	· For most engymes the optimum temperature
400	is about 30°c.
3	· Many are a lot lower
	cold water jist die at 30°c because their
	enzymes denative.
	· A Jew bacteria have emymes that can
11	withstand temperatures up to 100°C
	· Mast enzymes are however July denatured
113	it have at 70°C.
	The optimum temperature jou an engine
000 00	controlled reaction will be a balance
	letween the 910 and denaturation
ot As	in was seemed from about house on
	THE ME SUCULAR OF ME STORE OF
	· Entrumes generally inactivates insymes.
	· PH optimum
1	· Maximum pH activity of most enzymes.
Lina.	between pH 4.5 and 8.0
	· Naverow pH erange
37	Exceptions.
	- Pepsin: Optimem pH is 1.8.
	· Toupnin: Optimum pH is 9.8.
•	The effect of pH.
	· Extreme pH levels will produce denaturation.
2011	· The Noucture of enjoyme is changed.
1	. The active state site is distorted and the
MO IN	substrate molecule will no langer fit in
	of a value Mightly alistenant tours the
	- At ph values slightly disserent som the
	enzyme's optimum value, small changes in
	· ·

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	The charges of the enzyme and its nebricate	
	The charges of the crisis	
ansano	molecules with affect	
	the binding of the substrate with the	
	the francing of the	
Their	achile Mille	
	. STATE THE COLUMN TO THE COLU	
000	Inhibitoris. Shaming that neduce the	
	Inhibitors are chimaco	
ration	grate of emismic hearners	
	· They are usually marge	
my	work at low content range	
30	They block the engine our one	
	imially almay is	
	· Many drugs and parsons are my works	
	of engymes in the newbus system.	
	" instrumed generally indelivates insurances	
•	The effect of injume inhibition	
2	sureverible inhibitors; combine with	
	the functional groups of the amino acids	
	in the active vite, loverently.	•
	· Reversible inhibitoris: These can be	
	washed out of the solution of enzyme	•
	by dialynis	
•	Effect of Product Concentration	
a sidente	The state of the s	
	· The accumulation of products generally	
de	decreaxes the enjume velocity.	
00 11	· you certain engines, the peroduct combine	
9	with the rite of emyme and forma	
	loose complex and thus inhibit	
****	insume activity (Feed back michanism)	

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	Effect of activators.			
	50me of the ingymes require inorganic metallic cations like Mg. Co ^{2†} , K [†] etc. for their optime. Metal activated enzymes: held by the enzyme 'Cg ATI Metallo engymes: Enzymes tightly Eg: Alcohol deby carbon anhydrase.	mack Enzyme Pase (Mg Lold	ivite is	hightl a ²⁺) netals
•	Effect of light and radiation.			
	exposite of enzymes to ultravious and/on x-rays may imachivate cer due to the Journation of peroxides	itain en	mm zym	ae.
	SOURCES OF ENZYMES			
•	Biologically active enzymes are examy living organisms. Selection of source of enzymes in your of extraction of purification. · Yype of extraction of purification. · Stability of the enzyme and · Cost of the enzymes.	fluences which per	;	