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$\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$

(CaHPO_4)

(CaCO_3)

(TCP)

L/P(ml/g)

$\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$

*

rabiee@nit.ac.ir :

:

:

F

[]

[]

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[]

[]

(Mpa)

[]

[]

NIST

]

MPa

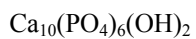
FDA

[

[]

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(I)



I

Ca/P= /

F

¹ Granule

² Injectable

³ Calcium phosphate bioceramics

⁴ Implant

⁵ Monroe

⁶ Biocompatibility

⁷ National Institute of Standards and Technology

¹¹ www.SID.ir

⁸ Food and Drug Administration

⁹ Toughness

¹⁰ Setting time

¹¹ Elastic modulus

(CaHPO₄) (CaCO₃) (TCP)
HA (%))

NaH₂PO₄·2H₂O

[]

pH

(Ca/P)

Ca/P

/

pH=

pH

NaH₂PO₄·2H₂O

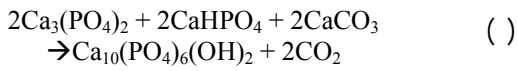
% % % % % % %

pH

/

[]

()



L/P(ml/gr)

/

L/P(ml/gr) = / / /

°C

L/P(mlg ⁻¹)				NaH ₂ PO ₄ ·2H ₂ O%
/	/	/	/	
/		/		
			/	
/	/			
/		/	/	
			/	

[]

(SBF)

(XRD)

HA	CaHPO ₄	CaCO ₃	TCP	

¹² Merck

¹³ Vicat

¹⁴ Instron Universal Testing Machine1196

¹⁵ Simulated Body Fluid

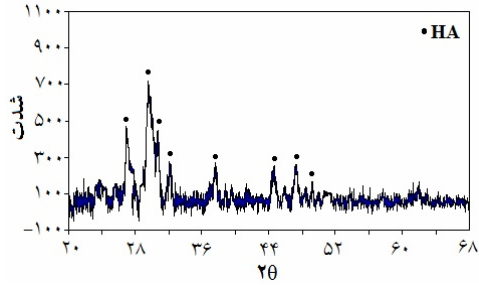
¹⁶ X-ray diffraction

XRD

% NaH₂PO₄·2H₂O

/ ml/gr

SBF



% NaH₂PO₄·2H₂O

XRD

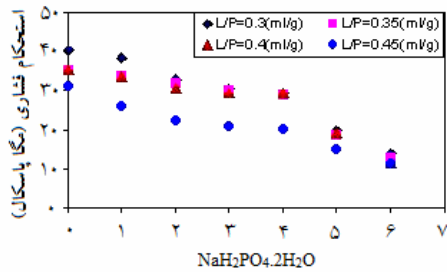
SBF

/ ml/gr

Mpa

°C

L/P(mg ⁻¹)				NaH ₂ PO ₄ ·2H ₂ O%
/	/	/	/	
	/		/	
			/	
/	/	/		
/	/		/	
/	/	/	/	
	/	/		
/	/	/	/	



°C

°C

L/P(mg ⁻¹)				NaH ₂ PO ₄ ·2H ₂ O%
/	/	/	/	
		/		
			/	
	/			
		/		

L/P

%

NaH₂PO₄·2H₂O

SBF

SBF

pH

SBF	L/P	°C	
NaH ₂ PO ₄ .2H ₂ O			/ Mpa
%			
NaH ₂ PO ₄ .2H ₂ O		[]	
		[]	
NaH ₂ PO ₄ .2H ₂ O			
			NaH ₂ PO ₄ .2H ₂ O
% NaH ₂ PO ₄ .2H ₂ O			
/ ml/gr			[]
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