

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

PUENTE DEL INCA (ARGENTINA)

Altitude: 2720 m.

Latitude: 32°49'S Longitude: 69°54'W

Temperature observation period.: 1941-1950 (10)

Rainfall observation period....: 1941-1950 (10)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	14.20	21.60	5.60	29.80	0.10	8.0	92.66
Feb.	13.40	20.70	4.90	28.40	-8.00	10.0	75.57
Mar.	11.30	18.80	3.80	26.00	-4.00	9.0	65.99
Apr.	8.60	16.20	1.40	26.70	-6.00	10.0	45.69
May.	4.70	10.60	-1.20	18.30	-12.00	48.0	25.30
Jun.	1.50	7.30	-4.30	19.80	-19.10	40.0	8.29
Jul.	-0.20	5.80	-6.00	15.80	-17.60	49.0	0.00
Aug.	0.70	6.90	-4.80	17.80	-18.60	58.0	4.75
Sep.	3.80	10.10	-2.50	20.80	-13.10	16.0	23.18
Oct.	6.80	13.50	0.10	24.90	-10.00	9.0	44.40
Nov.	9.40	16.00	3.10	25.80	-10.00	13.0	60.59
Dec.	13.00	19.20	5.00	28.00	-5.00	0.0	86.95
Year	7.27	13.89	0.42	23.51	-10.27	270	533.38

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	71
Compensated thermicity index.....(Itc):	71
Simple continentality index.....(Ic):	14.4
Diurnality index.....(Id):	16.0
Annual ombrothermic index.....(Io):	2.53
Monthly estival ombrothermic index.....(Ios1):	No
Bimonthly estival ombrothermic index.....(Ios2):	0.65
Threemonthly estival ombrothermic index.....(Ios3):	0.44
Fourmonthly estival ombrothermic index.....(Ios4):	0.62
Annual ombro-evaporation index.....(Ioe):	0.23
Annual positive temperature.....(Tp):	874
Annual negative temperature.....(Tn):	2
Estival temperature.....(Ts):	406
Positive precipitation.....(Pp):	221

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	4	0	3	4	1

Latitudinal Belt...: Subtropical

Continentalty.....: Oceanic - High Euoceanic

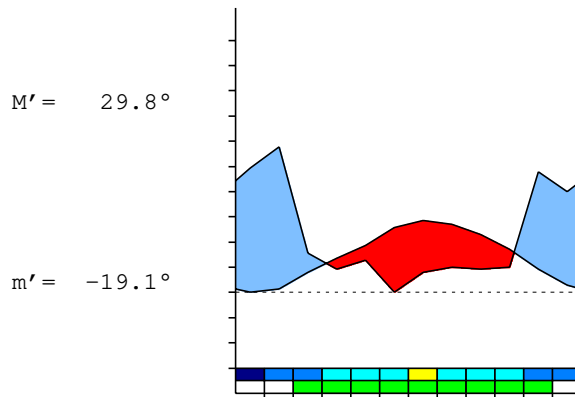
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: LOW OROMEDITERRANEAN LOW DRY

PUENTE DEL INCA (ARGENTINA)

2720 m

P= 270 32° 49'S 69° 54'W 10/10 y.
 T= 7.3° Ic= 14.4 Tp= 874 Tn= 2
 m= -6.0° M= 5.8° Itc= 71 Io= 2.5



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 LOW OROMEDITERRANEAN LOW DRY

WATER INDEX CARD PUENTE DEL INCA (ARGENTINA)
 Altitude: 2720 m. Latitude: 32° 49'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	-0.2	0	49	46	100	0	0	3	2	*
Aug.	0.7	5	58	0	100	5	0	53	27	11.2
Sep.	3.8	23	16	-7	93	23	0	0	14	-0.3
Oct.	6.8	44	9	-35	57	44	0	0	7	-0.7
Nov.	9.4	61	13	-48	10	61	0	0	3	-0.7
Dec.	13.0	87	0	-10	0	10	77	0	2	-1.0
Jan.	14.2	93	8	0	0	8	85	0	1	-0.9
Feb.	13.4	76	10	0	0	10	66	0	0	-0.8
Mar.	11.3	66	9	0	0	9	57	0	0	-0.8
Apr.	8.6	46	10	0	0	10	36	0	0	-0.7
May.	4.7	25	48	23	23	25	0	0	0	0.8
Jun.	1.5	8	40	32	54	8	0	0	0	3.8
Year	7.3	533	270	*	*	213	320	57	57	*

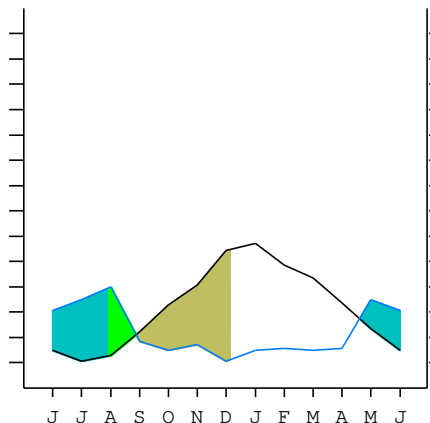
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coeficient DF = Deficit SP = Superavit

PUENTE DEL INCA (ARGENTINA)

32°49'S 69°54'W 2720 m 10/10 y.

T= 7.3 Ic= 14.4 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= -6.0 Tp= 874 LOW OROMEDITERRANEAN
 M= 5.8 Tn= 2 LOW DRY
 M' = 29.8 Itc= 71
 m' = -19.1 Io= 2.5
 P= 270 mm
 PE= 533 mm

Imbibing	19 Apr.
Saturation	28 Jul.
Reserve Use	27 Aug.
Deficit	4 Dec.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B2a]
 + Type: B. Oceanic
 + Subtype: 2. Euoceanic
 + Variant: a. High
 Thermic types [A3.B5]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: B. Temperate
 + Thermic subtype: 5. Subtemperate
 Bioclimatic types [B8.5b.5b]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 8. PLUVISEASONAL-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 5. OROMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Mehc.Ome.Dry

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 50
 Coldest semester of the year.....(Psw): 220
 Warmest four months period of the year.....(Pcm1): 27
 Following warmest four months period.....(Pcm2): 147
 Positive precipitation dryest 3 months.....(Ppd): 18
 Positive precipitation dryest 2 months.....(Ppd2): 8
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 18
 Positive precipitation warmest 2 months.....(Pps2): 18
 Positive precipitation warmest 1 month.....(Pps1): 8
 Positive precipitation coldest 3 months.....(Ppw): 98
 Positive precipitation coldest 2 months.....(Ppw2): 58
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	147	38	18	67

Seasonal rainfall rhythms: W > F > P > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 14.2
 Average coldest month [T].....(Tmin): -0.2
 Maximum temp. warmest month [M].....(Tmmax): 21.6
 Minimum temp. coldest month [m].....(Tmmin): -6.0
 Absolute Max.temp. warmest month [M'].....(Tamax): 29.8
 Absolute Min.temp. coldest month [m'].....(Tamin): -19.1
 First warmest contrasted month [M].....(Tcmax): 21.6 (1)
 First coldest contrasted month [m].....(Tcmin): 5.6 (1)
 Estival temperature.....(Ts): 406
 Positive temperature dryest 3 months.....(Tpd): 406
 Positive temperature dryest 2 months.....(Tpd2): 272
 Positive temperature dryest 1 month.....(Tpd1): 130
 Positive temperature warmest 3 months.....(Tps): 406
 Positive temperature warmest 2 months.....(Tps2): 276
 Positive temperature warmest 1 month.....(Tps1): 142
 Positive temperature coldest 3 months.....(Tpw): 22
 Positive temperature coldest 2 months.....(Tpw2): 7
 Positive temperature coldest 1 month.....(Tpw1): 0

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SEASONAL PARAMETERS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Warmest semester...(Sms)	o	o	o	o							o	o
Dryest semester....(Smd)	o	o	o							o	o	o
Warmest 4 months...(Cm1)	o	o	o									o
Dryest 4 months....(Cmd)	o	o	o									o
Vegetation Activity(Pav)	o	o	o	o	o				o	o	o	o
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)							o					
Subgelid.....[m <=0] (Pf)					o	o	o	o	o			
Pregelid.....[m' <=0] (Pf)		o	o	o	o	o	o	o	o	o	o	o
Agelid.....[m' > 0] (Pf)	o											
HiperAgelid..[all>0] (Pf)	o											

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.98
 Mediterranean index of January.....(Im1): 11.58
 Mediterranean index of January & February.....(Im2): 9.35
 Mediterranean index of December to February...(Im3): 14.18

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	0	80	100	90	100	480	400	*	580	160	90	130
Tp	130	142	134	113	86	47	15	*	7	38	68	94
Io (Iom)	0.00	0.56	0.75	0.80	1.16	10.2	26.7	*	82.9	4.21	1.32	1.38
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	180 / 406			670 / 246			*/*			380 / 200		
Io (Iot)	0.443			2.724			*			1.900		
Semesters	December-May						June-November					
Pp(x10)/Tp	850 / 652						*/*					
Io (Iosm)	1.304						*					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 2210/874=2.53 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	0	80	100	90	100	480	400	*	580	160	90	130
Tp [T*10]	130	142	134	113	86	47	15	*	7	38	68	94
Iom [Pp/Tp]	0	56	75	80	116	\$\$	\$\$!!	\$\$	421	132	138
Avm [200-Iom]	200	144	125	120	84	***	***	***	***	***	68	62
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	180 / 406			670 / 246			* / *			380 / 200		
Iot [Pp/Tp]	44			272			**			190		
Avs E[Avm<200]	469			***			***			***		
Lower ultrahyperarid [1]						Strong lower arid [1]						
Weak lower arid [1]						Strong upper arid [2]						
Strong lower semiarid [1]						Weak lower semiarid [2]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp): 14.40
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]	24.77
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]	22.02
+ Oceanic (20<CI<40)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)]	1.21
+ Subcontinental (1.1<CI<1.7)	
Rainfall Index of Lang (1925) [R=P/T]	37.16
+ Steppic (40>R>0)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)]	15.64
+ Semiarid -mediterranean- (20>Ia>15)	
I of Emberger (1930) [Q=100*P/(Tmmax ² -Tmmin ²)]	62.71
+ Subhumid (90>Q>50)	
I of Dantin & Revenga (1940) [DR=100*T/P]	2.69
+ Semiarid (3>DR>2)	
Aridity Index of UNEP [I=P/PE]	0.51
+ Subhumid - dry (0.65>I>0.5)	
Potential Erosion I of Fournier (1960) [K=Pi ² /P].....	12.46
+ Very low (K<60)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 5. Meso-microthermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.03	0.04	0.04	0.05	0.30	0.28	0.38	0.44	0.09	0.04	0.06	0.00
T-E ratio	6.39	6.03	5.09	3.87	2.11	0.68	0.00	0.31	1.71	3.06	4.23	5.85
Precipitation-effectiveness: 17.39						Temperature-efficiency						39.33
Moisture Index [MI=100*(P-PE)/PE]												-49.38
+ D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]												60.00
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												10.61
+ Moderate surplus (10<HI<20)												
Potential Evapotranspiration PE												533.38
+ Second microthermic (427<PE<570)												

