Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

VIEDMA AERO (ARGENTINA) Altitude: 6 m.

Latitude: 40°51'S Longitude: 63°1'W
Temperature observation period.: 1971-1993 (23)
Rainfall observation period....: 1971-1993 (23)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPi
Jan.	21.94	29.25	14.95	0.00	0.00	33.6	130.12
Feb.	20.94	23.60	18.40	0.00	0.00	39.6	102.41
Mar.	18.20	22.48	14.03	0.00	0.00	34.1	83.45
Apr.	14.31	18.58	10.13	0.00	0.00	33.3	51.07
May.	10.12	15.35	4.95	0.00	0.00	33.5	28.15
Jun.	7.01	11.10	3.30	0.00	0.00	22.0	14.92
Jul.	6.85	12.00	1.60	0.00	0.00	24.9	15.55
Aug.	8.34	11.38	5.53	0.00	0.00	22.0	22.97
Sep.	10.81	16.00	5.60	0.00	0.00	23.5	36.46
Oct.	14.01	18.00	10.20	0.00	0.00	25.5	61.22
Nov.	17.54	23.83	11.48	0.00	0.00	25.2	89.42
Dec.	20.31	26.08	15.03	0.00	0.00	24.0	119.00
Year	14.20	18.97	9.60	0.00	0.00	341	754.75

BIOCLIMATIC INDICES AND DIAGNOSIS

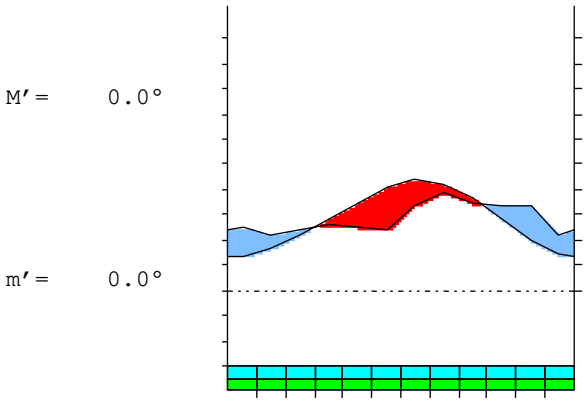
Thermicity index.....(It): 278
Compensated thermicity index.....(Itc): 278
Simple continentality index.....(Ic): 15.1
Diurnality index.....(Id): 14.3
Annual ombrothermic index.....(Io): 2.00
Monthly estival ombrothermic index.....(Ios1): 1.18
Bimonthly estival ombrothermic index.....(Ios2): 1.71
Threemonthly estival ombrothermic index.....(Ios3): 1.54
Fourmonthly estival ombrothermic index.....(Ios4): 1.52
Annual ombro-evaporation index.....(Ioe): 0.45
Annual positive temperature.....(Tp): 1704
Annual negative temperature.....(Tn): 0
Estival temperature.....(Ts): 632
Positive precipitation.....(Pp): 341

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	6	6	0	0

Latitudinal Belt...: Low Eutemperate
Continentality.....: Oceanic - Low Euoceanic
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC
Bioclimatic Belt...: UPPER MESOMEDITERRANEAN LOW DRY

VIEDMA AERO (ARGENTINA) 6 m

P= 341 40° 51′S 63° 1′W 23/23 y.
T= 14.2 ° Ic= 15.1 Tp= 1704 Tn= 0
m= 1.6 ° M= 12.0 ° Itc= 278 Io= 2.0



MEDITERRANEAN PLUVISEASONAL-OCEANIC
UPPER MESOMEDITERRANEAN LOW DRY

WATER INDEX CARD VIEDMA AERO (ARGENTINA)
Altitude: 6 m. Latitude: 40° 51′S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	6.8	16	25	9	22	16	0	0	0	0.5
Aug.	8.3	23	22	-1	21	23	0	0	0	0.0
Sep.	10.8	36	24	-13	8	36	0	0	0	-0.3
Oct.	14.0	61	25	-8	0	33	28	0	0	-0.5
Nov.	17.5	89	25	0	0	25	64	0	0	-0.7
Dec.	20.3	119	24	0	0	24	95	0	0	-0.7
Jan.	21.9	130	34	0	0	34	96	0	0	-0.7
Feb.	20.9	102	40	0	0	40	63	0	0	-0.6
Mar.	18.2	83	34	0	0	34	49	0	0	-0.5
Apr.	14.3	51	33	0	0	33	18	0	0	-0.3
May.	10.1	28	34	5	5	28	0	0	0	0.1
Jun.	7.0	15	22	7	12	15	0	0	0	0.4
Year	14.2	755	341	*	*	341	414	0	0	*

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

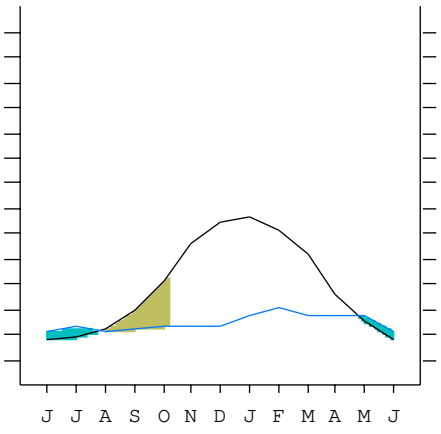
VIEDMA AERO (ARGENTINA)

40°51′S 63°1′W 6 m 23/23 y.

T= 14.2 Ic= 15.1
m= 1.6 Tp= 1704
M= 12.0 Tn= 0
M′= 0.0 Itc= 278
m′= 0.0 Io= 2.0
P= 341 mm
PE= 755 mm

MEDITERRANEAN PLUVISEASONAL-OCEANIC
UPPER MESOMEDITERRANEAN
LOW DRY

Imbibing	24 Apr.
Saturation	
Reserve Use	28 Jul.
Deficit	7 Oct.



VIEDMA AERO (ARGENTINA)

Latitude: 40°51'S Longitude: 63°1'W Altitude: 6 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [B2b]
- + Type .....: B. Oceanic
- + Subtype .....: 2. Euoceanic
- + Variant .....: b. Low

Thermic types [B1.B4]
- + Latitudinal zone ....: B. Temperate
- + Latitudinal belt ....: 1. Low Eutemperate
- + Thermic type .....: B. Temperate
- + Thermic subtype .....: 4. Temperate

Bioclimatic types [B8.3a.5b]
- + Macrobioclimate .....: B. MEDITERRANEAN
- + Bioclimate .....: 8. PLUVISEASONAL-OCEANIC
- + Bioclimatic variant .:
- + Thermic type.....: 3. MESOMEDITERRANEAN
- + Thermic subtype.....: a. UPPER
- + Ombrothermic type ...: 5. DRY
- + Ombrothermic subtype : b. LOW

Bioclimatic Classification .....Mepo.Mme.Dry.Euo

VIEDMA AERO (ARGENTINA)

Latitude: 40°51'S Longitude: 63°1'W Altitude: 6 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 190
Coldest semester of the year.....(Psw): 151
Warmest four months period of the year.....(Pcm1): 131
Following warmest four months period.....(Pcm2): 114
Positive precipitation dryest 3 months.....(Ppd): 69
Positive precipitation dryest 2 months.....(Ppd2): 45
Positive precipitation dryest 1 month.....(Ppd1): 22
Positive precipitation warmest 3 months.....(Pps): 97
Positive precipitation warmest 2 months.....(Pps2): 73
Positive precipitation warmest 1 month.....(Pps1): 34
Positive precipitation coldest 3 months.....(Ppw): 69
Positive precipitation coldest 2 months.....(Ppw2): 47
Positive precipitation coldest 1 month.....(Ppw1): 25

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	68	74	97	100

Seasonal rainfall rhythms: F > S > P > W

VIEDMA AERO (ARGENTINA)

Latitude: 40°51'S Longitude: 63°1'W Altitude: 6 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 21.9
Average coldest month [T].....(Tmin): 6.8
Maximum temp. warmest month [M].....(Tmmax): 29.3
Minimum temp. coldest month [m].....(Tmmin): 1.6
Absolute Max.temp. warmest month [M'].....(Tamax): 0.0
Absolute Min.temp. coldest month [m'].....(Tamin): 0.0
First warmest contrasted month [M].....(Tcmax): 29.3 (1)
First coldest contrasted month [m].....(Tcmin): 14.9 (1)
Estival temperature.....(Ts): 632
Positive temperature dryest 3 months.....(Tpd): 222
Positive temperature dryest 2 months.....(Tpd2): 192
Positive temperature dryest 1 month.....(Tpd1): 83
Positive temperature warmest 3 months.....(Tps): 632
Positive temperature warmest 2 months.....(Tps2): 429
Positive temperature warmest 1 month.....(Tps1): 219
Positive temperature coldest 3 months.....(Tpw): 222
Positive temperature coldest 2 months.....(Tpw2): 139
Positive temperature coldest 1 month.....(Tpw1): 69

VIEDMA AERO (ARGENTINA)

Latitude: 40°51'S Longitude: 63°1'W Altitude: 6 m

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	o	o	o
Ultragelid...[M'<=0](Pf)												
Hypergelid...[M <=0](Pf)												
Gelid.....[T <=0](Pf)												
Subgelid.....[m <=0](Pf)												
Pregelid.....[m'<=0](Pf)												
Agelid.....[m'> 0](Pf)												
HiperAgelid..[all>0](Pf)	o	o	o	o	o	o	o	o	o	o	o	o

VIEDMA AERO (ARGENTINA)

Latitude: 40°51'S Longitude: 63°1'W Altitude: 6 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 2.21
Mediterranean index of January.....(Im1): 3.87
Mediterranean index of January & February.....(Im2): 3.18
Mediterranean index of December to February...(Im3): 3.62

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	240	336	396	341	333	335	220	249	220	235	255	252
Tp	203	219	209	182	143	101	70	69	83	108	140	175
Io (Iom)	1.18	1.53	1.89	1.87	2.33	3.31	3.13	3.63	2.63	2.18	1.82	1.44

Seasons	Summer	Automn	Winter	Spring
Pp(x10)/Tp	972 / 632	1009 / 426	688 / 222	742 / 424
Io (Iot)	1.539	2.368	3.097	1.751

Semesters	December-May	June-November
Pp(x10)/Tp	1981 / 1058	1429 / 646
Io (Iosm)	1.873	2.214

VIEDMA AERO (ARGENTINA)

Latitude: 40°51'S Longitude: 63°1'W Altitude: 6 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 3411/1704=2.00 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	240	336	396	341	333	335	220	249	220	235	255	252
Tp [T*10]	203	219	209	182	143	101	70	69	83	108	140	175
Iom [Pp/Tp]	118	153	189	187	233	331	313	363	263	218	182	144
Avm [200-Iom]	82	47	11	13	***	***	***	***	***	***	18	56

Seasons	Summer	Automn	Winter	Spring
Pp / Tp	972 / 632	1009 / 426	688 / 222	742 / 424
Iot [Pp/Tp]	154	237	310	175
Avs E[Avm<200]	139	***	***	***

Strong lower semiarid [1]	Weak lower semiarid [1]
Strong upper semiarid [2]	Weak upper semiarid [3]

VIEDMA AERO (ARGENTINA)

Latitude: 40°51'S Longitude: 63°1'W Altitude: 6 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 15.09
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....: 18.82
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....: 19.08
  + Hyperoceanic (-20<CI<20)
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 1.03
  + Oceanic (0.6<CI<1.1)
Rainfall Index of Lang (1925) [R=P/T] .....: 24.02
  + Steppic (40>R>0)
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 14.10
  + Arid -steppic- (15>Ia>5)
I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)] .....: 39.99
  + Semiarid (50>Q>30)
I of Dantin & Revenga (1940) [DR=100*T/P] .....: 4.16
  + Arid (6>DR>3)
Aridity Index of UNEP [I=P/PE] .....: 0.45
  + Semiarid (0.5>Im>0.2)
Potencial Erosion I of Fournier (1960) [K=Pi²/P].....: 4.60
  + Very low (K<60)

VIEDMA AERO (ARGENTINA)

Latitude: 40°51'S Longitude: 63°1'W Altitude: 6 m

BIOCLIMATIC INDICES II

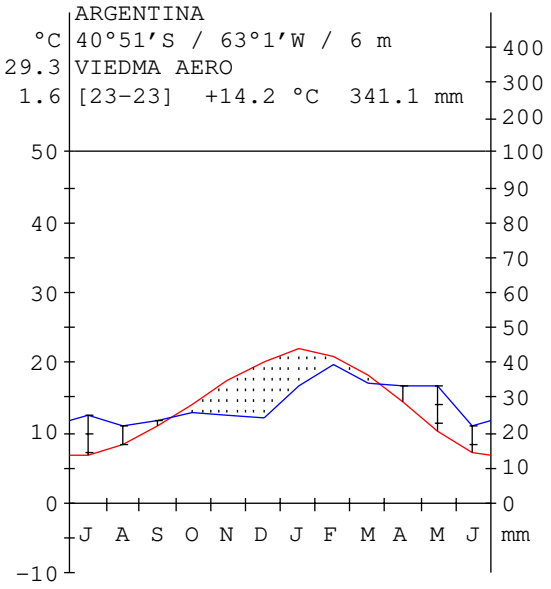
Bioclimatic classification of Gaussen & Bagnouls (1957)
  + Climate ....: A. Warm and temperate warm
  + Region .....: 3. Termoxeroteric (Mediterranean warm)
  + Thermic type: 4. Mesothermic

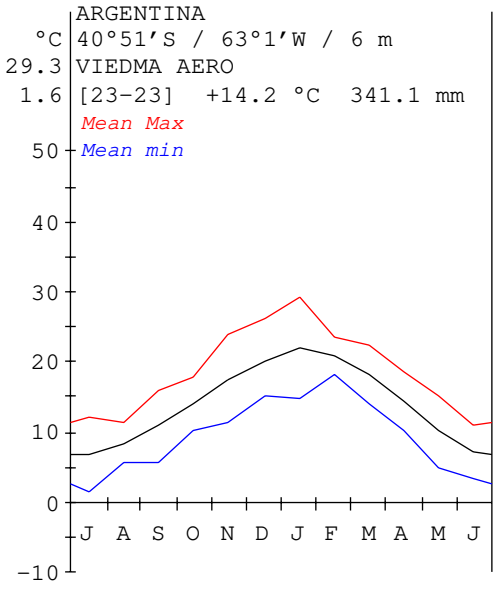
Thornthwaite (1948)

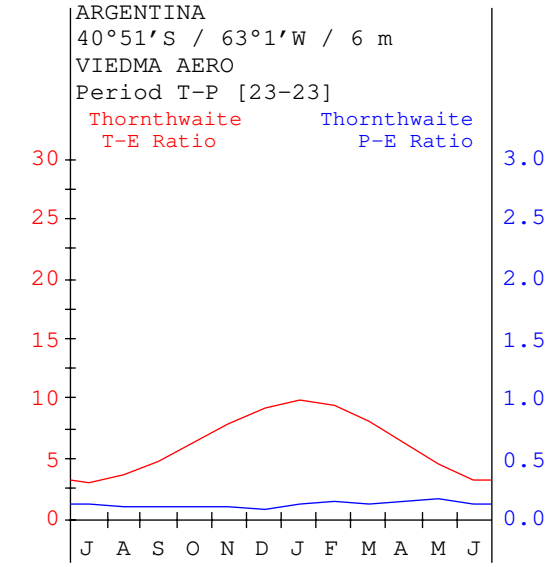
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.12	0.15	0.13	0.14	0.16	0.11	0.13	0.11	0.11	0.11	0.10	0.08
T-E ratio	9.87	9.42	8.19	6.44	4.55	3.15	3.08	3.75	4.86	6.30	7.89	9.14

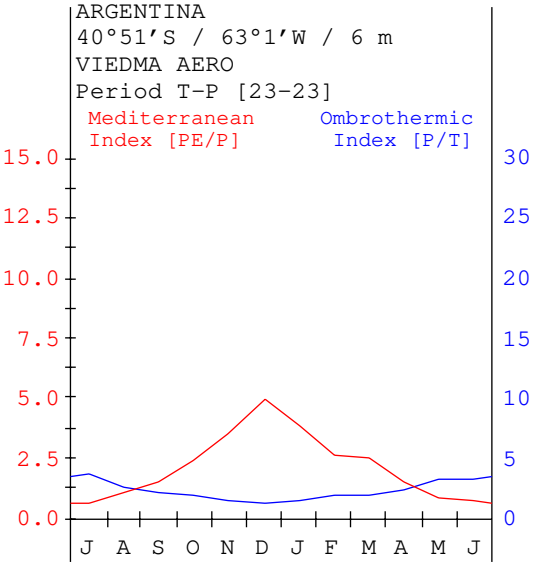
Precipitation-effectiveness: 14.58 Temperature-efficiency ....: 76.67

Moisture Index [MI=100*(P-PE)/PE] .....: -54.81
  + D.Semiarid (-66.7<MI<-33.3)
Index of dryness [DI=100*d/PE] .....: 54.80
  + Strong deficit (33.3<DI)
Index of humidity [HI=100*s/PE] .....: 0.00
  + No surplus (0<HI<10)
Potential Evapotranspiration PE .....: 754.75
  + Second mesothermic (712<PE<855)




ARGENTINA
°C 40°51'S / 63°1'W / 6 m
29.3 VIEDMA AERO
1.6 [23-23] +14.2 °C 341.1 mm
Mean Max
Mean min
50
40
30
20
10
0
-10
J A S O N D J F M A M J


ARGENTINA
40°51'S / 63°1'W / 6 m
VIEDMA AERO
Period T-P [23-23]
Thornthwaite T-E Ratio
Thornthwaite P-E Ratio
30
25
20
15
10
5
0
3.0
2.5
2.0
1.5
1.0
0.5
0.0
J A S O N D J F M A M J


ARGENTINA
40°51'S / 63°1'W / 6 m
VIEDMA AERO
Period T-P [23-23]
Mediterranean Index [PE/P]
Ombrothermic Index [P/T]
15.0
12.5
10.0
7.5
5.0
2.5
0.0
30
25
20
15
10
5
0
J A S O N D J F M A M J