

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

DJANET (ALGERIA)

Altitude: 1096 m.

Latitude: 24°33'N Longitude: 9°28'E

Temperature observation period.: 1973-1994 (22)

Rainfall observation period....: 1979-1994 (16)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPi
Jan.	12.50	18.89	6.11	29.44	-2.22	7.6	13.48
Feb.	15.00	21.67	8.33	31.67	-0.56	2.5	22.20
Mar.	19.72	26.11	13.33	35.00	2.22	1.3	58.01
Apr.	24.45	31.11	17.78	40.00	2.22	2.5	113.22
May.	29.17	35.56	22.78	47.78	11.11	5.1	180.40
Jun.	31.67	37.78	25.56	42.22	17.22	1.3	201.64
Jul.	31.11	37.22	25.00	43.89	16.67	1.3	201.71
Aug.	30.84	36.67	25.00	46.11	16.11	1.3	190.67
Sep.	28.89	35.00	22.78	40.00	15.00	1.3	157.72
Oct.	24.72	31.11	18.33	38.89	12.22	1.3	109.26
Nov.	19.72	26.11	13.33	35.00	3.33	1.3	51.26
Dec.	14.45	20.56	8.33	28.89	-2.22	1.3	20.31
Year	23.52	29.82	17.22	38.24	7.59	28	1319.9

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	485
Compensated thermicity index.....(Itc):	491
Simple continentality index.....(Ic):	19.2
Diurnality index.....(Id):	13.3
Annual ombrothermic index.....(Io):	0.10
Monthly dry ombrothermic index.....(Iod1):	0.04
Bimonthly dry ombrothermic index.....(Iod2):	0.04
Three monthly dry ombrothermic index.....(Iod3):	0.04
Four monthly dry ombrothermic index.....(Iod4):	0.07
Annual ombro-evaporation index.....(Ioe):	0.70
Annual positive temperature.....(Tp):	2822
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	936
Positive precipitation.....(Pp):	28

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	0	0	12	0

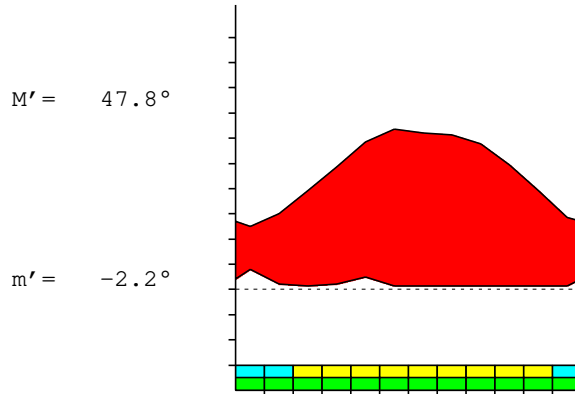
Latitudinal Belt...: Subtropical

Continentalty.....: Oceanic - High Semicontinental

Bioclimate(Variant): TROPICAL HYPERDESERTIC (EXTREME)

Bioclimatic Belt...: UPPER THERMOTROPICAL LOW ULTRAHYPERARID

DJANET (ALGERIA) 1096 m
 P= 28 24° 33'N 9° 28'E 22/16 y.
 T= 23.5° Ic= 19.2 Tp= 2822 Tn= 0
 m= 6.1° M= 18.9° Itc= 491 Io= 0.1



TROPICAL HYPERDESERTIC (EXTREME)
 UPPER THERMOTROPICAL LOW ULTRAHYPERARID

WATER INDEX CARD DJANET (ALGERIA)
 Altitude: 1096 m. Latitude: 24° 33'N

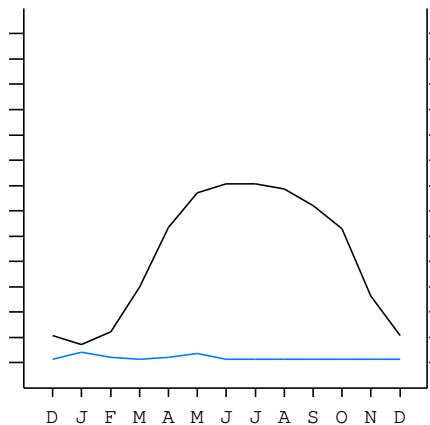
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	12.5	13	8	0	0	8	6	0	0	-0.4
Feb.	15.0	22	3	0	0	3	20	0	0	-0.8
Mar.	19.7	58	1	0	0	1	57	0	0	-0.9
Apr.	24.5	113	3	0	0	3	111	0	0	-0.9
May.	29.2	180	5	0	0	5	175	0	0	-0.9
Jun.	31.7	202	1	0	0	1	200	0	0	-0.9
Jul.	31.1	202	1	0	0	1	200	0	0	-0.9
Aug.	30.8	191	1	0	0	1	189	0	0	-0.9
Sep.	28.9	158	1	0	0	1	156	0	0	-0.9
Oct.	24.7	109	1	0	0	1	108	0	0	-0.9
Nov.	19.7	51	1	0	0	1	50	0	0	-0.9
Dec.	14.4	20	1	0	0	1	19	0	0	-0.9
Year	23.5	1320	28	*	*	28	1292	0	0	*

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

DJANET (ALGERIA) 24°33'N 9°28'E 1096 m 22/16 y.
 T= 23.5 Ic= 19.2 TROPICAL HYPERDESERTIC (EXTREME)
 m= 6.1 Tp= 2822 UPPER THERMOTROPICAL
 M= 18.9 Tn= 0 LOW ULTRAHYPERARID
 M' = 47.8 Itc= 491
 m' = -2.2 Io= 0.1
 P= 28 mm —
 PE= 1320 mm —

■	Imbibing
■	Saturation
■	Reserve Use
□	Deficit

All over the year,
 there is hydric deficit



DJANET (ALGERIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]
 + Type: B. Oceanic
 + Subtype: 1. Semicontinental
 + Variant: b. High

Thermic types [A3.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm

Bioclimatic types [A1.2a.1b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 1. HYPERDESERTIC
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 1. ULTRAHYPERARID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trpl.Ttr.Uha

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 12
 Coldest semester of the year.....(Psw): 17
 Warmest four months period of the year.....(Pcm1): 9
 Following warmest four months period.....(Pcm2): 5
 Positive precipitation dryest 3 months.....(Ppd): 4
 Positive precipitation dryest 2 months.....(Ppd2): 3
 Positive precipitation dryest 1 month.....(Ppd1): 1
 Positive precipitation warmest 3 months.....(Pps): 4
 Positive precipitation warmest 2 months.....(Pps2): 3
 Positive precipitation warmest 1 month.....(Pps1): 1
 Positive precipitation coldest 3 months.....(Ppw): 11
 Positive precipitation coldest 2 months.....(Ppw2): 9
 Positive precipitation coldest 1 month.....(Ppw1): 8

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	11	8	3	3

Seasonal rainfall rhythms: W > P > S > F

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 31.7
 Average coldest month [T].....(Tmin): 12.5
 Maximum temp. warmest month [M].....(Tmmax): 37.8
 Minimum temp. coldest month [m].....(Tmmin): 6.1
 Absolute Max.temp. warmest month [M'].....(Tamax): 47.8
 Absolute Min.temp. coldest month [m'].....(Tamin): -2.2
 First warmest contrasted month [M].....(Tcmax): 21.7 (2)
 First coldest contrasted month [m].....(Tcmin): 8.3 (2)
 Dry station temperature.....(Td): 936
 Positive temperature dryest 3 months.....(Tpd): 936
 Positive temperature dryest 2 months.....(Tpd2): 628
 Positive temperature dryest 1 month.....(Tpd1): 197
 Positive temperature warmest 3 months.....(Tps): 936
 Positive temperature warmest 2 months.....(Tps2): 628
 Positive temperature warmest 1 month.....(Tps1): 317
 Positive temperature coldest 3 months.....(Tpw): 420
 Positive temperature coldest 2 months.....(Tpw2): 270
 Positive temperature coldest 1 month.....(Tpw1): 125

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 46.97
 Mediterranean index of July.[PE/P].....(Im1): 155.16
 Mediterranean index of July & August.....(Im2): 150.91
 Mediterranean index of June, July & August....(Im3): 152.31

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	13	76	25	13	25	51	13	13	13	13	13	13
Tp	145	125	150	197	245	292	317	311	308	289	247	197
Io (Iom)	0.09	0.61	0.17	0.07	0.10	0.17	0.04	0.04	0.04	0.04	0.05	0.07
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	114 / 420			89 / 733			39 / 936			39 / 733		
Io (Iot)	0.272			0.121			0.042			0.053		
Semesters	December-May						June-November					
Pp(x10)/Tp	203 / 1153						78 / 1669					
Io (Iosm)	0.176						0.047					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 281/2822=0.10 [Upper ultrahyperarid \(2\) \[2250\]](#)

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	13	76	25	13	25	51	13	13	13	13	13	13
Tp [T*10]	145	125	150	197	245	292	317	311	308	289	247	197
Iom [Pp/Tp]	9	61	17	7	10	17	4	4	4	4	5	7
Avm [200-Iom]	191	139	183	193	190	183	196	196	196	196	195	193
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	114 / 420			89 / 733			39 / 936			39 / 733		
Iot [Pp/Tp]	27			12			4			5		
Avs E[Avm<200]	514			566			588			584		
Lower ultrahyperarid [10]						Upper ultrahyperarid [4]						
Lower hyperarid [1]						Weak lower arid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	19.17
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		58.04
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		43.46
+ Subcontinental (40<CI<60)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		2.09
+ Continental (1.7<CI<2.3)		
Rainfall Index of Lang (1925) [R=P/T]		1.19
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		0.84
+ Extremely arid -desert- (5>Ia>0)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		2.02
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P]		83.70
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE]		0.02
+ Hyperarid (0.05>Im)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		2.06
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

- + Climate
- + Region
- + Thermic type: 2. Macrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.03	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T-E ratio	5.63	6.75	8.87	11.00	13.13	14.25	14.00	13.88	13.00	11.12	8.87	6.50
Precipitation-effectiveness: 0.80						Temperature-efficiency						127.01
Moisture Index [MI=100*(P-PE)/PE]												-97.87
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]												97.86
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												1319.89
+ Forth mesothermic (997<PE<1440)												

