

# Phytosociological Research Center

www.globalbioclimatics.org

## Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

### ZAKATALY (AZERBAIJAN)

Altitude: 518 m.

Latitude: 41° 38'N Longitude: 46° 39'E

Temperature observation period.: 1952-1994 (43)

Rainfall observation period....: 1984-1994 (11)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
<b>Jan.</b>	1.67	5.56	-2.22	20.00	-22.78	25.7	2.23
<b>Feb.</b>	3.06	7.22	-1.11	23.89	-13.89	38.6	5.25
<b>Mar.</b>	6.67	11.11	2.22	27.78	-12.22	71.4	19.83
<b>Apr.</b>	12.22	17.22	7.22	31.11	-3.89	120.9	50.69
<b>May.</b>	17.50	22.78	12.22	36.11	1.11	106.7	94.71
<b>Jun.</b>	21.12	26.67	15.56	36.11	6.11	113.3	124.49
<b>Jul.</b>	24.17	29.44	18.89	38.89	8.89	68.3	151.80
<b>Aug.</b>	24.45	30.00	18.89	38.89	7.78	42.4	143.44
<b>Sep.</b>	18.89	24.44	13.33	37.22	2.22	106.4	87.08
<b>Oct.</b>	14.17	18.89	9.44	32.78	-5.00	84.6	53.00
<b>Nov.</b>	8.06	12.22	3.89	25.00	-7.78	50.5	20.62
<b>Dec.</b>	3.61	7.22	0.00	22.78	-18.89	25.7	6.39
<b>Year</b>	12.97	17.73	8.19	30.88	-4.86	854	759.53

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	163
Compensated thermicity index.....(Itc):	205
Simple continentality index.....(Ic):	22.8
Diurnality index.....(Id):	11.1
Annual ombrothermic index.....(Io):	5.49
Monthly estival ombrothermic index.....(Ios1):	1.73
Bimonthly estival ombrothermic index.....(Ios2):	2.28
Threemonthly estival ombrothermic index.....(Ios3):	3.21
Fourmonthly estival ombrothermic index.....(Ios4):	3.79
Annual ombro-evaporation index.....(Ioe):	1.13
Annual positive temperature.....(Tp):	1556
Annual negative temperature.....(Tn):	-0
Estival temperature.....(Ts):	697
Positive precipitation.....(Pp):	854

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0°
Months	10	1	1	0	0

Latitudinal Belt...: Eutemperate

Continental...: Continental - Low Subcontinental

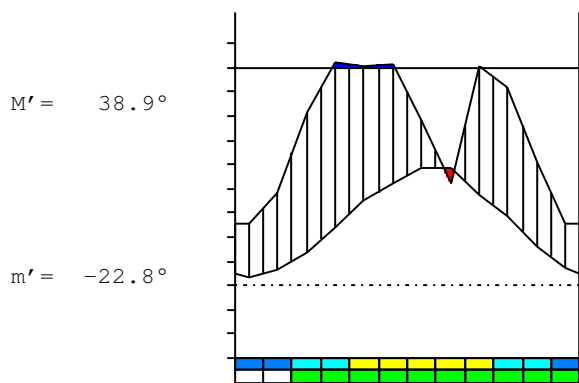
Bioclimate(Variant): TEMPERATE CONTINENTAL (STEPPIC)

Bioclimatic belt...: UPPER MESOTEMPERATE UPPER SUBHUMID

**ZAKATALY (AZERBAIJAN)**

518 m

P= 854 41° 38'N 46° 39'E 43/11 y.  
 T= 13.0 ° Ic= 22.8 Tp= 1556 Tn= -0  
 m= -2.2 ° M= 5.6 ° Itc= 205 Io= 5.5



**TEMPERATE CONTINENTAL (STEPPIC)  
 UPPER MESOTEMPERATE UPPER SUBHUMID**

**WATER INDEX CARD ZAKATALY (AZERBAIJAN)**

Altitude: 518 m. Latitude: 41° 38'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	1.7	2	26	0	100	2	0	23	12	10.5
Feb.	3.1	5	39	0	100	5	0	33	23	6.3
Mar.	6.7	20	71	0	100	20	0	52	37	2.6
Apr.	12.2	51	121	0	100	51	0	70	54	1.3
May.	17.5	95	107	0	100	95	0	12	33	0.1
Jun.	21.1	124	113	-11	89	124	0	0	16	0.0
Jul.	24.2	152	68	-84	5	152	0	0	8	-0.5
Aug.	24.5	143	42	-5	0	48	96	0	4	-0.7
Sep.	18.9	87	106	19	19	87	0	0	2	0.2
Oct.	14.2	53	85	32	51	53	0	0	1	0.5
Nov.	8.1	21	50	30	81	21	0	0	0	1.4
Dec.	3.6	6	26	19	100	6	0	0	0	3.0
<b>Year</b>	13.0	760	854	*	*	664	96	191	191	*

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

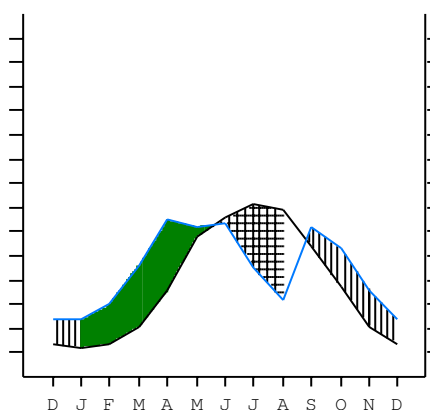
**ZAKATALY (AZERBAIJAN)**

41°38'N 46°39'E 518 m 43/11 y.

T= 13.0 Ic= 22.8  
 m= -2.2 Tp= 1556  
 M= 5.6 Tn= -0  
 M' = 38.9 Itc= 205  
 m' = -22.8 Io= 5.5  
 P= 854 mm  
 PE= 760 mm

**TEMPERATE CONTINENTAL (STEPPIC)  
 UPPER MESOTEMPERATE  
 UPPER SUBHUMID**

	Imbibing	26 Aug.
■	Saturation	30 Dec.
▣	Reserve Use	16 May.
□	Deficit	2 Aug.



**ZAKATALY (AZERBAIJAN)**

Latitude: 41°38'N Longitude: 46°39'E Altitude: 518 m

**SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION**

Continental Index [C2a]  
 + Type .....: C. Continental  
 + Subtype .....: 2. Subcontinental  
 + Variant .....: a. Low

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

Bioclimatic types [C2a.3a.6a]  
 + Macrobioclimate .....: C. TEMPERATE  
 + Bioclimate .....: 2. CONTINENTAL  
 + Bioclimatic variant .: a. STEPPIC  
 + Thermic type.....: 3. MESOTEMPERATE  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 6. SUBHUMID  
 + Ombrothermic subtype : a. UPPER

**Bioclimatic Classification .....: Teoc (Stp) .Mte. Shu**

**ZAKATALY (AZERBAIJAN)**

Latitude: 41°38'N Longitude: 46°39'E Altitude: 518 m

**PRECIPITATION PARAMETERS**

Warmest semester of the year.....(Pss): 522  
 Coldest semester of the year.....(Psw): 333  
 Warmest four months period of the year.....(Pcm1): 330  
 Following warmest four months period.....(Pcm2): 186  
 Positive precipitation dryest 3 months.....(Ppd): 90  
 Positive precipitation dryest 2 months.....(Ppd2): 51  
 Positive precipitation dryest 1 month.....(Ppd1): 26  
 Positive precipitation warmest 3 months.....(Pps): 224  
 Positive precipitation warmest 2 months.....(Pps2): 111  
 Positive precipitation warmest 1 month.....(Pps1): 42  
 Positive precipitation coldest 3 months.....(Ppw): 90  
 Positive precipitation coldest 2 months.....(Ppw2): 64  
 Positive precipitation coldest 1 month.....(Ppw1): 26

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	90	299	224	241

**Seasonal rainfall rhythms: P > F > S > W****ZAKATALY (AZERBAIJAN)**

Latitude: 41°38'N Longitude: 46°39'E Altitude: 518 m

**TEMPERATURE PARAMETERS**

Average warmest month [T].....(Tmax): 24.5  
 Average coldest month [T].....(Tmin): 1.7  
 Maximum temp. warmest month [M].....(Tmmax): 30.0  
 Minimum temp. coldest month [m].....(Tmmin): -2.2  
 Absolute Max.temp. warmest month [M'].....(Tamax): 38.9  
 Absolute Min.temp. coldest month [m'].....(Tamin): -22.8  
 First warmest contrasted month [M].....(Tcmax): 26.7 (6)  
 First coldest contrasted month [m].....(Tcmin): 15.6 (6)  
 Estival temperature.....(Ts): 697  
 Positive temperature dryest 3 months.....(Tpd): 83  
 Positive temperature dryest 2 months.....(Tpd2): 53  
 Positive temperature dryest 1 month.....(Tpd1): 17  
 Positive temperature warmest 3 months.....(Tps): 697  
 Positive temperature warmest 2 months.....(Tps2): 486  
 Positive temperature warmest 1 month.....(Tps1): 244  
 Positive temperature coldest 3 months.....(Tpw): 83  
 Positive temperature coldest 2 months.....(Tpw2): 47  
 Positive temperature coldest 1 month.....(Tpwl): 17

**ZAKATALY (AZERBAIJAN)**

Latitude: 41°38'N Longitude: 46°39'E Altitude: 518 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
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid....[m <=0] (Pf)	o	o										o
Pregelid....[m' <=0] (Pf)	o	o	o	o						o	o	o
Agelid.....[m' > 0] (Pf)					o	o	o	o	o			
HiperAgelid..[all>0] (Pf)					o	o	o	o	o			

**ZAKATALY (AZERBAIJAN)**

Latitude: 41°38'N Longitude: 46°39'E Altitude: 518 m

**OMBROTHERMIC PARAMETERS**

Annual aridity index.[PE/P].....(Iar): 0.89  
Mediterranean index of July.[PE/P].....(Im1): 2.22  
Mediterranean index of July & August.....(Im2): 2.67  
Mediterranean index of June, July & August....(Im3): 1.87

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	257	257	386	714	1209	1067	1133	683	424	1064	846	505
Tp	36	17	31	67	122	175	211	242	245	189	142	81
<b>Io (Iom)</b>	7.12	15.4	12.6	10.7	9.89	6.10	5.36	2.83	1.73	5.63	5.97	6.27
Seasons	<b>Winter</b>			<b>Spring</b>			<b>Summer</b>			<b>Autumn</b>		
Pp(x10)/Tp	900 / 83			2990 / 364			2240 / 697			2415 / 411		
<b>Io (Iot)</b>	10.79			8.217			3.212			5.873		
Semesters	<b>December-May</b>						<b>June-November</b>					
Pp(x10)/Tp	3890 / 447						4655 / 1109					
<b>Io (Iosm)</b>	8.697						4.199					

**ZAKATALY (AZERBAIJAN)**

Latitude: 41°38'N Longitude: 46°39'E Altitude: 518 m

**BIOCLIMATIC INDICES I**

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 22.78  
CI of Gorezinski (1920) [1.7\*Sp/sin(Lat)-20.4] .....: 37.89  
CI of Conrad (1946) [1.7\*Sp/sin(Lat+10)-14] .....: 35.39  
+ Oceanic (20<CI<40)  
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 1.53  
+ Subcontinental (1.1<CI<1.7)  
Rainfall Index of Lang (1925) [R=P/T] .....: 65.90  
+ Temperate warm (100>R>60)  
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 37.21  
+ Humid (60>Ia>30)  
I of Emberger (1930) [Q=100\*P/(Tmmax<sup>2</sup>-Tmmin<sup>2</sup>)] .....: 95.47  
+ Humid (Q>90)  
I of Dantin & Revenga (1940) [DR=100\*T/P] .....: 1.52  
+ Humid (2>DR>0)  
Aridity Index of UNEP [I=P/PE] .....: 1.13  
+ Humid (I>0.65)  
Potential Erosion I of Fournier (1960) [K=Pi<sup>2</sup>/P].....: 17.11  
+ Very low (K<60)

**ZAKATALY (AZERBAIJAN)**

Latitude: 41°38'N Longitude: 46°39'E Altitude: 518 m

**BIOCLIMATIC INDICES II**

Bioclimatic classification of Gaussen & Bagnouls (1957)

- + Climate ....: A. Warm and temperate warm
- + Region .....: 3. Termoxerotic (Mediterranean warm)
- + Thermic type: 4. Mesothermic

Thorntwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.17	0.25	0.43	0.64	0.48	0.47	0.25	0.14	0.46	0.41	0.28	0.16
T-E ratio	0.75	1.38	3.00	5.50	7.88	9.50	10.88	11.00	8.50	6.38	3.63	1.62
Precipitation-effectiveness: 41.27						Temperature-efficiency ....: 70.02						
Moisture Index [MI=100*(P-PE)/PE] .....: 12.50 + C2.Subhumid humid (0<MI<20)												
Index of dryness [DI=100*d/PE] .....: 12.60 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE] .....: 25.11 + Strong surplus (20<HI)												
Potential Evapotranspiration PE .....: 759.53 + Second mesothermic (712<PE<855)												

