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Tasting ability to PTC: Some methodological considerations

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Methods of research on taste sensitivity were reviewed. Attention was drawn to incompatible ways of preparing and making the tests and as a result to the incomparibility of the results.

Since the pioneering work of FOX [1931] who discovered PTC taste polymorphism, a very large number of studies have become available from all over the world. A review of literature reveals that varied procedures have been adopted in differentiating the tasters from non-tasters. Thus the use of varied techniques make us to pause and think on some methodoligical issues, because if a single uniform technique is not used, then we will get different results and data thus obtained will be uncomparable. It will also be difficult to find the proximity of one group to another with the help of PTC tasting ability, which subsequently will loose its utility and importance in anthropological studies. Therefore, in this paper we would like to present the variedness of techniques adopted (followed), and to stimulate a debate on the methodology of PTC tasting ability.

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FOX [1931] and SNYDER [1931, 1932] used dry crystal of PTC and para ethoxy phenylthiourea respectively. It was BLAKESLEE [1932] who made a „stock solution of 1/3000 (0.2%), which was about ten times weaker than the concentrated solution at 18°..." (see HARTMAN [1939]). Hartman's „stock solution" has been saturated solution at 18°C, i. e. 0.26%. Fisher's [FALCONER 1947] strongest solution contained 1.6 g of PTC per 1000 ml of water. On the other hand HARRIS and KALMUS [1949] used a stock solution containing 0.13% of phenylthiourea (PTC). KANG et al. [1967] used 0.16 mg of PTC per litre of water for the most diluted solution (no. 14). Recently SCOTT-EMUAKPAR et al. [1975] prepared the stock solution by dissolving 4660 mg in one litre of hot alcohol. As „the vast majority of recent studies has been done with 1949 method" [KALMUS 1980] of Harris and Kalmus, we can stick to the weight suggested by HARRIS and KALMUS [1949].

In the beginning dry crystal of PTC [Fox 1931], dry crystal of para-ethoxy phenylthiourea [Snyder 1931, 1932] and filter paper strips [Parr 1934] were used. It was Blakeslee in 1932 [Das 1966] for the first time who dissolved the chemical substance (PTC) and made serial dilutions for recording the tasters and non-tasters. Lateron Harris and Kalmus [1949] improved upon this serial dilution technique and proposed ‚sorting technique', which is commonly used. Garrate et al. [1975] used ‚sensitized paper' for finding ‚grose categories of tasters and non-tasters'. Scott-Enuakpor et al. [1975] used ‚filter paper strip' (Whatman 3 mm) after immersing them in different serial dilution solution of PTC dissolved in hot alcohol. It is observed that dry crystal, dry powder, serial dilution, serial dilution sorting, paper strip and serial dilution paper strip methods have been in practice. Das [1966] writes „Blakeslee [1932] noted that few could taste bitterness in the solution even in high dilution, while they are unable to taste crystal. This should warn all workers against the use of dry crystal or powder in PTC taste investigation". Recently ‚serial dilution paper strip' technique has been suggested. Though this seems to be a good replacement of ‚sorting technique'; but before we adopt this, we have to find but its reliability. Because in this alcohol has been used as a solvent in place of water. So, for time being we can go ahead with ‚sorting technique'.

The studies reveal that PTC was dissolved in tap water [Falconer 1949], in boiled tap water [Harris and Kalmus 1949], in distilled water [Mohr 1951], in boiled water [Allison and Blumberg 1959], in double distilled deionised water [Crandall and Spence 1974], in local water [Barnicot and Woodburn 1975, Greene 1974] and in hot alcohol [Scott-Enuakpor et al 1975]. Not only this Sunderland and Rosa [1975] used distilled water for making stock solution and used local water for making serial dilutions. There have been arguments for using distilled water, boiled tap water and local water as a solvent. But what should be used is a debateable point. Nevertheless, we should use only one media for making the stock solution and as well as for making serial dilution, for which local water or distilled water can be used.

Blakeslee [1932] in his family study „diagnosed all individuals who are able to taste the stock solution or weaker concentration as tasters and those who could not taste the stock solution as non-tasters". Falconer's [1947] view on the determination of tasters and non-tasters is that „the practice during the course of tests and in the later works based on these results (eg. Boyd and Boyd [1937], Riddell [1939, 1940] and Riddell and Wyber [1944]) has been to make P 6 the critical concentrations, those for whom this was below the threshold being classed as non-tasters". Alsbirk and Alsbirk [1972] „decided to place the dividing line between 4 and 5 in individual 40 years old, and between steps 3 and 4 in age groups above 40". Bonnie et al. [1972] used solution 5 as dividing line, because they say that „in a study of taste sensitivity among the Jewish groups in Israel (20) the antimode was found in solution No. 5 or i.e. subjects with taste threshold at solution No. 5 or lower were regarded as non-tasters....". Seth and Seth [1973] separated „the tasters from non-tasters between the threshold solution number 4 and 5...", but antimode is at solution number 3. According to Lightman et al.

[1970] „the antimode was taken at solution number 4 and few subjects in this group were icluded among non-tasters". What is this few? SUNDERLAND and ROSA [1975] found antimode „between solution number 3 and 4 ... (and) ... subjects who taste threshold lay at solution no. 3 were all included as nontasters". BHASIN [1967], BONNE et al [1972], ALSBIRK and ALSBIRK [1972] and few others combined the male and female non-tasters to give the group's (male and female combined together) frequency and have not considered the group data's antimode in dividing the tasters and non-tasters. GRANDALL and SPENCE [1974] writes that „the taste threshold show a bimodal distribution with the antimode at solution 6 strength so that subjects who are able to taste a weaker solution than this are classified as tasters". HARRIS and KALMUS [1949] suggested that „... the simple classification into tasters and non-tasters was essentially a reflection of the biomodal distribution of taste threshold". DAS [1966] made it more clear and said that „... the antimode divides the distribution into two distinct parts; the one toward the smaller solution number (higher threshold) correspond to non--tasters and the other to tasters". Thus it has been suggested that „antimode value... will be the usual point of division between tasters and non-tasters" [KALMUS 1958].

The foregoing presentation indicate that though most of the workers have used „serial dilution sorting technique" (the method of Harris and Kalmus), but not have adhere to the suggestion of KALMUS [1959] to use the antimode as dividing line between tasters and non--tasters. As is evident from the above that many researchers (such as FALCONER [1947]; PAOLUCCI et al [1971]; BONNE et al [1972]; GREENE [1974]; SUNDERLAND and ROSA [1975]; DeSTEFANO and MOLIERI [1976]; FRISANCHO et al. [1977]) divided the two classes (tasters and non-tasters) taking into consideration a particular solution. In some of the studies, the antimode have been ignored in dividing tasters and non-tasters for the combined samples [TIWARI and BHASIN 1967; BONNE et al. 1972; ALSBIRK and ALSBIRK 1972].

Some twenty years back KALMUS and SMITH [1965] have demonstrated the usefulness and the basis (rational) of the antimode and the line of optimal separation, in the biomodal distribution. As has been pointed out earlier the majority of workers agree and follow antimode division for the classification of tasters and non-tasteres, but no uniform pattern has been followed. Thus for making uniformity and comparability of the data, we should follow the antimode as dividing line between tasters and non-tasters and can adopt that (a) The antimode (frequency) and below this all subjects should be included in non-tasters, (b) If we get lowest frequency at two consecutive solutions, then one value will be included in the tasters and other in the nontasters, as the antimode will be in between, (c) If we get lowest frequency at three consecutive solutions then the middle and below to it will give the frequency of nontasters, (d) If we get more than one antimode then the first antimode (from stock solution i.e. from 1) should be considered as the dividing line. (e) For finding the tasters and non-tasters frequency in combined sample (male and female together), we should always follow the antimode and should not pool male and female non-tasters frequency to

Table 1

Population	Author	Sex	N	0	1	2	3	4
Fisher's Data	Falconer 1947	M	390	16	30	21	12	12
		F	239	10	10	15	7	5
Spaniards	Pons 1955	M	203	12	17	11	4	5
		F	103	6	10	4	2	2
	Harris et Kalmus 1949	M	441	31	37	21	26	23
Onge	Buchi et Roy 1955	M	35	1	2	3	5	1
		F	31	1	1	1	2	3
		T	66	2	3	4	7	4
Mahar	Das et al. 1961	M	229	41	52	25	4	4
		F	204	15	50	30	6	5
		T	433	56	102	55	10	9
Newar	Tiwari et Bhasin 1967	M	298	21	26	12	10	12
		F	291	18	24	9	7	7
		T	589	39	50	21	17	19
Korean	Kang et al. 1967	M	403	9	12	15	3	11
		F	368	15	15	17	9	5
		T	771	24	27	32	12	16
Brahmin	Mahapatra et Das 1968	M	104	20	5	5	5	4
		F	85	17	5	5	4	2
		T	189	37	10	10	9	6
Habbanites	Bonne et al. 1972	M	227	12	11	8	3	5
		F	254	11	5	4	12	6
		T	481	23	16	12	15	11
Greenland Eskimo	Alsbirk et Alsbirk 1972	T	129	44	17	5	1	2
Burmese	Than-Than-Sint et Mya-tu 1974	M	150	2	8	3	3	3
		F	150	2	8	4	1	0
		T	300	4	16	7	4	3
Nigerian	Scott-Enuakpor et al. 1975	M	1198	123	33	12	2	1
		F	815	54	13	14	1	1
		T	2013	177	46	26	3	2
Students	Chakraborty et Ghoria 1972	–	212	3	15	25	19	6
Esperanza	Greene 1974	M	70	0	–	–	–	–
		F	63	0	–	–	–	–
		T	133	0	–	–	–	–
Tocacli	-do-	M	66	0	–	–	–	–
		F	65	0	–	–	–	–
		T	131	0	–	–	–	–
Angami Naga	Seth et Seth 1973	T	150	4	1	3	0	1
Kurds	Lignman et al. 1970	T	346	42	26	16	5	4
Cyrenaica	Sunderland et Rosa 1975	T	65	1	10	–	3	0
Tripolitania	– " –	T	50	0	6	–	4	1
Fezzan	– " –	M	52	2	5	–	2	3
All Libya	– " –	T	167	3	21	–	9	4
Kiambu Kikuyu	– " –	M	50	0	1	–	0	5
		F	50	0	0	–	3	0
		T	100	0	1	–	3	5
Murangs	– " –	M	40	0	9	–	1	5
		F	40	0	0	–	0	3
		T	80	0	0	–	1	8
Kamba	– " –	M	50	2	3	–	2	2
		F	45	1	2	–	1	1
		T	95	3	5	–	3	3
Taita	– " –	M	55	0	1	–	0	1
		F	45	1	0	–	0	0
		T	100	1	1	–	0	1
Population D	–	–	123	16	7	5	2	4
Population T	–	–	162	20	8	3	3	3

* includes persons tasting solution numbers 15 and 16
** indicate that no solution was used
** Distribution is made from graph as original frequencies not given

Threahold										Non-Tasters	
5	6	7	8	9	10	11	12	13	14	Author's	Qur's
10	9	14	57	104	80	25	–	–	–	26,57	28,20
6	5	15	18	63	83	12	–	–	–	23,43	19,66
3	2	11	24	51	38	19	5	0	1	22,61	26,60
0	0	3	5	23	25	11	7	3	2	23,30	23,30
10	13	29	51	73	73	29	18	6	1	31,15	33,56
1	5	3	5	5	3	1	0	–	–	34,29	34,28
2	5	6	6	3	1	0	0	–	–	29,03	32,26
3	10	9	11	8	4	1	0	–	–	31,82	34,85
6	3	24	38	13	8	5	1	5	–	55,02	58,95
5	8	9	20	31	21	3	0	1	–	51,96	51,96
11	11	33	58	44	29	8	1	6	–	53,58	53,58
21	24	32	37	54	44	3	1	1	0	23,15	23,15
13	18	24	30	64	42	25	7	1	2	22,35	19,93
34	42	56	67	118	86	28	8	2	2	22,75	21,56
5	16	42	95	105	63	22	4	0	0	13,65	9,68
0	8	7	24	104	107	45	10	2	0	16,58	16,58
5	24	49	119	210	170	67	14	2	0	15,05	15,05
6	13	15	15	11	1	2	0	0	–	39,42	37,50
4	6	9	11	15	9	0	0	0	–	36,47	38,82
10	19	24	26	26	10	2	0	0	–	38,09	38,09
5	15	14	24	41	43	18	8	20	–	19,4	14,98
13	13	16	20	47	33	31	16	27	–	20,1	7,87
18	28	30	44	88	76	49	24	47	–	19,75	16,00
2	6	17	13	13	6	3	0	0	0	53,5	51,94
2	7	7	11	35	40	15	11	2	1	12,67	14,00
0	1	4	12	29	55	27	4	2	1	10,00	10,00
2	8	11	23	64	95	42	15	4	2	12,00	12,00
2	3	2	43	93	567	201	45	45	26*	14,2	14,27
0	0	7	21	39	429	169	40	16	11*	10,1	10,18
2	3	9	64	132	996	370	85	61	37*	12,5	12,62
4	6	6	23	44	40	19	1	1	–	32,07	33,96
2	0	7	4	20	25	7	5	0	–	–	2,85
6	0	1	11	12	18	9	5	1	–	–	9,52
8	0	8	15	32	43	16	10	1	–	6,50	6,02
3	1	3	8	12	21	12	4	2	–	–	6,06
4	0	3	8	10	19	14	5	2	–	–	6,15
7	1	6	16	22	40	26	9	4	–	5,30	6,10
1	3	4	7	43	37	29	7	7	3	6.00	5,33
5	18	32	76	72	30	9	2	0	9	27,5	26,87
0	3	10	–	38	–	0	–	–	–	21,54	21,54
0	0	8	–	28	–	3	–	–	–	20,00	22,00
5	4	10	–	18	–	3	–	–	–	17,31	17,30
5	7	28	–	84	–	6	–	–	–	19,76	22,15
5	6	14	–	16	–	3	–	–	–	2,00	2,00
1	2	14	–	26	–	4	–	–	–	6,00	6,00
6	8	28	–	42	–	7	–	–	–	4,00	1,00
1	5	12	–	14	–	2	–	–	–	2,50	17,50
3	8	16	–	10	–	0	–	–	–	0,00	0,00
4	13	28	–	24	–	2	–	–	–	1,25	16,25
8	5	12	–	14	–	2	–	–	–	14,00	14,00
0	10	15	–	12	–	3	–	–	–	8,88	11,11
8	15	27	–	26	–	5	–	–	–	11,58	11,57
6	3	10	–	29	–	5	–	–	–	1,82	1,81
0	2	7	–	29	–	6	–	–	–	2,22	2,22
6	5	17	–	58	–	11	–	–	–	2,00	2,00
7	2	8	11	18	20	11	8	3	1	–	24,39
8	18	19	31	20	16	15	7	2	1	–	24,69

get the non-tasters frequency of combined (group) sample.

We have compiled few works by different workers and presented them in table 1. We have also calculated the non--tasters frequencies as per our suggestions (table 1). It is clear from the table that in some cases there is some differences in the non-tasters frequencies. It is therefore advocated here that we should come to some conclusion and as such we start this debate, with a hope that we achieve methodological unification.

Another point to be mentioned here that DAS [1966] „have come across several instances in the data of his own as well as of others, in which only one mode could be seen and that in the taster region of the distribution, whereas the portion of cure lying in the non-tasters region instead of showing a mode rises up and cuts the frequency axis". In the two samples of SUNDERLAND and ROSA [1975] the same single mode distribution is observed. In these cases, how to use antimode dividing line is difficult to suggest.

It has been observed that few have used a particular solution as the dividing line between tasters and non-tasters. If we accept this way of dividing tasters and non-tasters then we can dispense with all other solution and can make only one solution. Persons who are unable to taste this solution should be classed as non--tasters and those who are able to taste it, as tasters. Then again comes the question of what weight (concentration) of PTC should be considered.

In the recent past a trend is setting in, where researchers are deleting few solutions, (table 2) though adopting Harris and Kalmus method. PAOLUCCI et al. [1971] prepared only six solutions (A = = 260.0, B = 65.0, D = 4.0 and F = 0.25/mg litre water) and classified a person „non-

Table 2

Population	Author		N	O	A	B	C	D	E	F	Non--tasters
					mg/l H_2O						
					260,0	65,0	16,0	4,0	1,0	0,25	
Peruvian Indians	Paolucci et al.	M	163	3	0	2	28	93	34	3	5(3,1)
	1971	F	100	0	0	0	9	60	31	0	0
		T	263	3	0	2	37	153	65	3	5(1,9)
Lowland Quecha	Frisancho et al.	M	442	18	10	33	221	122	38	–	28(6,3)
	1977	F	278	14	6	19	127	79	33	–	20(7,2)
Lowland Mestiya	-do-	M	436	21	11	29	234	107	34	–	32(7,3)
		F	428	20	7	23	216	149	13	–	27(6,3)
Highland Quecha	-do-	M	167	2	3	21	98	38	5	–	5(3,0)
		F	162	2	3	7	125	25	0	–	5(3,1)
					1300	130	13	1,3			
Miskito	De Stefano and	M	43		3	7	32	1			10(23,26)
	Molieri 1976	F	53		1	9	41	2			10(18,87)
Sumo	-do-	M	40		0	3	39	2			3(7,50)
		F	45		0	4	39	2			4(8,89)
Rame	-do-	M	35		0	0	24	11			0
		F	44		0	1	24	19			1(2,27)

-taster if he could not recognise a solution containing 65 mg PTC in one litre water (solu.B.) GREENE [1974] „eliminated solution comparable to solution 1 (8.54 mM), 2 (4.27 mM), 3 (2.13 mM) and 4 (1.06 mM) of Harris and Kalmus (49)". SUNDERLAND and ROSE [1975] used Harris and Kalmus method without using solution number 2,8 and 10. De STEFANO and MOLIERI [1976] used a „modification of Harris and Kalmus (50) sorting method... by means of four decreasing solution of PTC in boiled tap water: solution *A* (1300 mg/l); *B* (130 mg/l); *C*(13 mg/l) and *D* (1.3 mg/l)" only. FRISANCHO et al. [1977] used a „version of method of HARRIS and KALMUS [1949] simplified according to WIDSTORM and HENSCHEN [1963] and PAOLUCCI et al. [1971]." GULATI et al. [1981] on the basis of the analysis of the threshold values in several Indian population used „... 7 bottle method involving T_1, T_6, T_{10} & T_{13}". Thus it is seen that a shortening of Harris and Kalmus method is perhaps under way.

Nevertheless the time has come when we should think over these issues and should come to a workable solution. It is suggested that till then we should follow Harris and Kalmus method in toto, without any variation.

References

ALLISON A. C. and B. S. BLUMBERG, 1959, *Ability to taste phenylthiocarbamide among the Alaskan Eskimos and other populations,* Hum. Biol., 31; 352-359.

ALSBIRK K. E. and P. H. ALSBIRK, 1972, *PTC taste sensitivity in Greenland Eskimos from Umanaq,* Hum. Here, 22; 445-52.

BARNICOT N. A. and J. C. WOODBURN, 1975, *Colourblindness and sensitivity to PTC in Hadze,* Ann. Hum. Biol., 2; 61-68.

BLAKESLEE A. F., 1932, *Genetics of sensory threshold – taste for phenylthiocarbamide,* Proc. Nat. Acd. Sc. Wash., 18; 120-130.

BONNIE B. S., ASHBEL, G. BERLIN and B. SELAH, 1972, *The Habbanite isolate: III Anthropometrics, taste sensitivity and colour vision*, Hum. Here, 22; 430-444.

BUCHI E. C. and S. ROY, 1955, *Taste, middle-phalangeal hair and colour vision of the Onge from little Andhaman,* Bull. Dept. Anth., 4; 7-10.

CHAKRABORTY R. and J. K. GHORAI, 1972, *A note on classification of taster and non-tasters,* Hum. Here., 22; 301-304.

GRANDALL B. F. and M. A. SPENCE, 1974, *Linkage relations of the phynylthiocarbamide locus* (PTC), Hum. Here, 24; 247-252.

DAS S. R., 1966, *Application of phenylthiocarbamide taste character in the study of racial variation,* J. Ind. Anthrop. Soc., 1; 63-80.

DAS S. R., N. KUMAR, P. N. BHATTACHARJEE and D. B. SASTRY, 1961, *Blood group (ABO, MN, & Rh), ABH secretion, sicklecell. PTC taste and colourblindness in the Mahar of Nagpur,* J. Roy. Anthrop. Inst., 91; 345-355.

DE STEFANO G. F. and J. J. MOLIERI, 1976, *PTC tasting among three Indian groups of Nicarague,* Am. J. Phys. Anthropol., 44; 371-374.

FALCONER D. S., 1947, *Sensory thresholds for solutions of phenylthiocarbamide,* Ann. Eug., 13; 211-222.

FOX A. D., 1931, *Science News Letter,* 18th April 1931.

FRISANCHO A. R., J. E. KLYMAN, T. SCHESSLER and A. B. WAY, 1977, *Taste sensitivity to phenylthiourea (PTC), Tongue rolling and Hand clasping among peruvians and other native American populations,* Hum. Biol. 49; 155-163.

GARRATO R. M., C. HOFF, P. T. BAKER and H. J. JACOBI, 1975, *Phenotype variation in ABO and Rh Blood group, PTC tasting ability and lingual rotation among southern Peruvian Quecha Indians,* Hum. Biol., 47; 193-199.

GREENE L. S., 1974, *Physical growth and development, Neurological maturation and behavioural functioning in two ecuatorian Andean communities in which Goiter endemic. II PTC taste sensitivity and neurological maturation*, Am. J. Phys. Anthrop., 41; 139-152.

GULATI R. K. et al., 1981, *'Fieldwork' In Biology of the people of Tamil Nadu* by L. D. Sanghai et al, Pune ISHG and Cal., ASI 981 pp.

HARRIS H. and H. KALMUS, 1949, *The measurement of taste sensitivity to phenylthiourea* (PTU), Ann. Eug., 15; 24-31.

HARTMAN G., 1939, *Application of individual taste difference towards PTC in genetic investigation*, Ann. Eug., 9; 123-135.

KALMUS H., 1957, *Defective colourvision, PTC tasting and drepanocytosis in samples from fifteen Brazilian populations*, Ann. Hum. Gen., 21; 313-317.

KALMUS H., 1958, *Improvements in the classification of taster genotypes*, Ann. Humn. Gen., 22; 222-230.

KALMUS H., 1980, *Personal communication*.

KALMUS H. and S. MAYNARD SMITH, 1965, *The antimode and lines of optimal separation in a genetically determined biomodal distribution with particular reference to phenyltiocarbamide sensitivity*, Ann. Hum. Gen., 29; 127-138.

KANG Y. S., W. K. CHO and K. S. YURN, 1967, *Taste sensitivity to phenylthiocarbamide of Korean population*, Eug. Quart., 14; 1-6.

LIGHTMAN S. L., D. L. CARR-LOCKS and H. G. PICKLES, 1970, *The frequency of PTC tasters and males defective in colour vision in a Kurdish population in Iran*, Hum. Biol., 42; 665-669.

MAHAPATRA U. D. and P. B. DAS, 1968, *Taste threshold for phenylthiocarbamide in some endogamous groups of Assam*, Anthropol., 15; 25-32.

MOHR J., 1951, *Taste sensitivity to phenylthiourea in Denmark*, Ann. Eug., 16; 282-286.

PAOLUCCI A. Mm., A. FERRO-LUZZI, G. MODIANO, G. MORPURGO and V. K. KANASHIRO, 1971, *Tase sensitivity to phenylthiocarbamide (PTC) and endemic goiter in Indian Natives of peruvian highlands*, Am. J. Phys. Anthrop. 34; 427-430.

PARR W., 1934, *Taste blindness and Race*, Jr. Here., 25; 187-190.

PONS J., 1955, *Taste sensitivity to phenylthiourea in Spaniards*, Hum. Biol., 27; 153-160.

SCOTT-ENUAKPOR A. B., J. E. UVIOVO and S. T. WARREN, 1975, *Genetic variation in Nigeria: I. The genetic of Phenylthiourea tasting ability*, Hum. Here., 24; 360-369.

SETH P. K. and S. SETH, 1973, *Genetical study of Angami Nagas (Nagaland) India: A_1, A_2 BO, MN, Rh blood group, Abo (H) secretion, PTC taste sensitivity and colour-blindness*, Hum. Biol., 45; 457-468.

SUNDERLAND E. and P. J. ROSA, 1975, *The ability to taste phenyltiocarbamide among the Tripolitianians, Cyrenaicans and fezzanites of Liya and the Kikuyu, Kamba and Taita of Kenya*, Hum. Biol., 47; 473-481.

SNYDER L. H., 1931, *Inability to taste is proved as a mendelian recessive*, Science, N. S. 74; 151-152.

SNYDER L. H., 1932, *Studies in human inheritance IX. The inheritance of taste deficiency in Man*, Ohio J. Sc., 32; 436-440.

THAN-THAN SINT and M. MYA-TU, 1974, *Taste sensitivity to PTC in a Burmese population sample*, Hum. Here., 24, 554-557.

TIWARI S. C. and M. K. BHASIN, 1967, *Taste sensitivity to phenyltiourea among the Newar population groups in Nepal*, Acta Gen. Med. Gemell., 16; 57-67.

Streszczenie

WRAŻLIWOŚĆ SMAKOWA NA PTC; ROZWAŻANIA METODOLOGICZNE. Krytyczny przegląd publikacji poświęconych wrażliwości smakowej, które – badana za pomocą PTC – traktowana jest jak marker genetyczny, ujawnił znaczne rozbieżności w metodyce badań stosowanej przez różnych autorów. Rozbieżności te dotyczą zarówno przygotowania roztworów PTC, sposobów wykonywania testów, jak również interpretacji genetycznej w badaniach poziomów wrażliwości.

Autorzy sugerują ujednolicenie metodyki badań i podają (w tabeli 1) zestawienie zebranych z piśmiennictwa wyników z przeliczeniem, wg swej własnej propozycji, częstości występowania braku wrażliwości na PTC.