



# MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE ÚSTRAŠICE

státní podnik

390 02 Tábor 2

Česká republika

## BROILER FEEDING TEST No. 7/2021

23 March 2021 – 5 May 2021

Study Investigator:  
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May 2021

## Basic tests information

### The basic dates

Beginning of the test: 1 March 2021 (setting in the incubator)  
23 March 2021 (transfer to the chicken house)  
End of the test: 5 May 2021

## Material and methods

### Material

In total there were 1792 day old chicks of [REDACTED]. Day old chicks were randomly distributed into 4 dietary treatments.

### Experimental treatments

Treat. No.	Treat.	Description	No. of pen	Birds per pen	No. of chick
1	T1	[REDACTED]	8	56	448
2	T2	[REDACTED]	8	56	448
3	T3	[REDACTED]	8	56	448
4	T4	[REDACTED]	8	56	448

Origin of hatching eggs: Mezinárodní testování drůbeže s.p., Ústrašice, age of the breeding flock was 46 weeks.

### Housing system

Chickens were kept in the windowless chicken house with full climatic control, on deep litter. Drinking water was supplied ad libitum by nipple drinkers. Each pen was equipped with manually filled tube feeders. Bedding material was wood shaving.

### Lighting programme

Day 1 - 7 23 hours of light + 1 hour of darkness  
Day 8 - 39 18 hours of light + 6 hours of darkness  
Day 40 - 43 23 hours of light + 1 hour of darkness

### Stocking density

16,3 broilers per square meter.

## Feed

Feed was produced in Mezinárodní testování drůbeže s.p., Ústrašice.

Day 1 – 14 Starter (BR1)

Day 15 – 28 Grower (BR2)

Day 29 – 43 Finisher (BR3)

## Diet formulas

Components (%)	Starter BR1	Grower BR2	Finisher BR3
Soybean meal	36.00	32.00	28.00
Wheat	35.00	38.04	41.80
Maize	20.56	20.58	20.17
Soybean oil	4.40	5.50	6.40
Limestone	1.47	1.35	1.17
MCP	1.10	1.10	1.00
Salt	0.29	0.29	0.29
Na <sub>2</sub> CO <sub>3</sub>	0.12	0.15	0.15
L-lysine HCl	0.30	0.28	0.26
L-threonine	0.20	0.15	0.20
DL-methionine	0.06	0.06	0.06
Premix AMVBR1 Plus	0.50	-	-
Premix AMVBR2 Plus	-	0.50	-
Premix AMVBR3 Plus	-	-	0.50
<b>Nutrient content</b>			
Crude protein (g/kg)	223.43	208.29	193.54
ME (MJ/kg)	12.34	12.69	13.00
Lysine (g/kg)	14.10	12.91	11.73
Methionine (g/kg)	6.02	5.42	4.92
Met.+Cys. (g/kg)	9.82	9.02	8.33
Ca (g/kg)	9.55	8.94	7.91
P (g/kg)	3.34	3.33	3.14
Na (g/kg)	1.53	1.61	1.61

## Veterinary precautions

The chicken house was disinfected by [REDACTED] before the chick placement. On days 1 chickens were vaccinated with [REDACTED].

## **Parameters recorded**

### **Live weight**

Live weight was measured on days 1 (all the birds in each pen were weighed altogether), 14 and 28 (all the birds were weighed individually, without fasting). On day 43 birds were weighed individually, after 12 hours of fasting.

### **Weight gain**

Weight gain per phase and average daily weight gains were calculated for the periods 1 – 14 days, 15 – 28 days, 29 – 43 days and for the overall experiment (1 – 43 days).

### **Feed conversion ratio**

Feed consumption and feed conversion ratio to gain ratio were calculated for the periods 1 – 14 days, 15 – 28 days, 29 – 43 days and for the overall experiment (1 – 43 days). The calculation was included weight of deaths.

### **Feed consumption**

Feed consumption was measured per pen for the feed – starter, grower and finisher.

### **Mortality**

All pens were checked twice a day to see if there were any dead or ill birds. Dead chickens were registered by date and reason of mortality on the day of death. Mortality was recorded for the periods 1 – 14 days, 15 – 28 days, 29 – 43 days and 1 – 43 days.

### **Carcass analysis**

The carcass analysis was done in 6 birds per each pen (3 ♂ and 3 ♀) on day 43. Breast muscles was weighed without skin and thigh muscles with skin.

### **Statistical analyses**

Performance results of live weight (on days 1, 14, 28, 43) were statistically evaluated using the ANOVA single-factor model (Duncan test, Scheffe test).

## **Results**

Tab. No. **1 Hatchability**

**2 Performance results:**

**2a Body weight**

**2b Weight gain**

**2c Feed conversion ratio per 1 kg of live weight**

**2d Feed consumption per 1 kg of weight gain**

**2e Feed consumption**

**3 Mortality**

**4 Carcass analysis**

**5 Statistical analysis of body weight at the age of 43 days**

(average body weight, standard deviation, coefficient of variation)

**6 Statistical analyses of performance results**

**7 Performance results per pen:**

**7a Body weight**

**7b Weight gain**

**7c Feed conversion ratio per 1 kg of live weight**

**7d Feed consumption per 1 kg of weight gain**

**7e Feed consumption**

**Results of incubation and hatching**

**Tab. No. 1**

Treatment	Tr. No.	Fertility	Hatchability		Birds housed	Average weight	
			Set eggs	Fertile eggs		Hatching eggs	Day old chicks
		%	%	%		g	g
T1	1	93.65	76.05	81.15	448	66.00	44.38
T2	2				448		44.40
T3	3				448		44.29
T4	4				448		44.06

**Body weight per phases**

**Tab. No. 2a**

Treatment	Tr. No.	Day 1		Day 14		Day 28		Day 43	
		Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight
			g		g		g		g
T1	1	448	44.38	444	495.15	439	1665.01	435	2952.19
T2	2	448	44.40	443	499.70	440	1678.92	438	3048.10
T3	3	448	44.29	443	518.09	439	1685.71	432	3002.34
T4	4	448	44.06	443	497.16	440	1643.13	435	2926.37

**Weight gain per phases**

**Tab. No. 2b**

<b>Treatment</b>	<b>Tr. No.</b>	<b>Day 1 - 14</b>		<b>Day 15 - 28</b>		<b>Day 29 - 43</b>		<b>Day 1 - 43</b>	
		Weight gain per phase	Daily weight gain	Weight gain per phase	Daily weight gain	Weight gain per phase	Daily weight gain	Weight gain per phase	Daily weight gain
		g	g	g	g	g	g	g	g
T1	1	450.77	32.20	1169.86	83.56	1287.18	85.81	2907.82	67.62
T2	2	455.30	32.52	1179.22	84.23	1369.18	91.28	3003.71	69.85
T3	3	473.80	33.84	1167.62	83.40	1316.63	87.78	2958.06	68.79
T4	4	453.10	32.36	1145.97	81.86	1283.23	85.55	2882.31	67.03



**Feed conversion ratio (Feed consumption per 1 kg of live weight)**

**Tab. No. 2c**

<b>Treatment</b>	<b>Tr. No.</b>	<b>Feed conversion ratio</b>		
		<b>Day 14</b>	<b>Day 28</b>	<b>Day 43</b>
		<b>g/kg LW</b>	<b>g/kg LW</b>	<b>g/kg LW</b>
T1	1	1173.96	1407.15	1775.22
T2	2	1204.01	1407.45	1725.87
T3	3	1164.20	1409.35	1776.10
T4	4	1176.07	1421.14	1777.50

**Feed consumption per 1 kg of weight gain (WG)****Tab. No. 2d**

<b>Treatment</b>	<b>Tr. No.</b>	<b>Feed consumption per 1 kg of weight gain</b>			
		<b>1-14 days</b>	<b>15-28 days</b>	<b>29-43 days</b>	<b>1-43 days</b>
		<b>g/kg WG</b>	<b>g/kg WG</b>	<b>g/kg WG</b>	<b>g/kg WG</b>
T1	1	1290.48	1506.72	2290.67	1802.80
T2	2	1322.46	1494.44	2144.33	1751.77
T3	3	1274.16	1519.11	2280.21	1803.46
T4	4	1291.62	1527.77	2275.69	1805.15

**Feed consumption per phases****Tab. No. 2e**

<b>Treatment</b>	<b>Tr. No.</b>	<b>Feed consumption</b>			
		<b>Starter (1-14 days)</b>	<b>Grower (15-28 days)</b>	<b>Finisher (29-43 days)</b>	<b>Total</b>
		kg	kg	kg	kg
T1	1	258.48	776.92	1271.01	2306.41
T2	2	267.38	776.12	1278.76	2322.26
T3	3	267.67	780.13	1275.06	2322.86
T4	4	259.47	774.68	1256.39	2290.54



Results of carcass analysis

Tab. No. 4

Treatment	Tr. No.	Sex	Weight				Ratio of abd. fat to live weight	Breast muscles without skin			Thigh muscles with skin			Total muscles			Carcass	
			Total	Body	Gibl.	Abd. fat		Weight	Percentage		Weight	Percentage		Weight	Percentage		Value	Yield
									Total weight	Body carcass		Total weight	Body carcass		Total weight	Body carcass		
			g	g	g	g		g	%	%	%	g	%	%	g	%	%	%
T1	1	♂	3294	2364	166	39	1.17	820	24.89	34.68	726	22.03	30.69	1546	46.93	65.37	71.78	76.81
		♀	2822	2058	161	40	1.42	710	25.16	34.51	618	21.88	30.01	1328	47.05	64.52	72.92	78.64
		♂	<b>3058</b>	<b>2211</b>	<b>163</b>	<b>39</b>	<b>1.28</b>	<b>765</b>	<b>25.02</b>	<b>34.60</b>	<b>672</b>	<b>21.97</b>	<b>30.38</b>	<b>1437</b>	<b>46.98</b>	<b>64.97</b>	<b>72.31</b>	<b>77.65</b>
T2	2	♂	3396	2444	172	37	1.08	856	25.20	35.02	734	21.60	30.01	1590	46.80	65.03	71.97	77.02
		♀	2845	2070	165	34	1.20	725	25.49	35.04	616	21.65	29.75	1341	47.14	64.79	72.76	78.56
		♂	<b>3121</b>	<b>2257</b>	<b>168</b>	<b>35</b>	<b>1.13</b>	<b>791</b>	<b>25.34</b>	<b>35.03</b>	<b>675</b>	<b>21.62</b>	<b>29.89</b>	<b>1465</b>	<b>46.96</b>	<b>64.92</b>	<b>72.33</b>	<b>77.72</b>
T3	3	♂	3305	2352	168	39	1.17	815	24.67	34.68	714	21.60	30.35	1529	46.27	65.03	71.15	76.22
		♀	2836	2038	158	40	1.41	713	25.13	34.98	612	21.57	30.02	1325	46.70	65.00	71.85	77.43
		♂	<b>3071</b>	<b>2195</b>	<b>163</b>	<b>39</b>	<b>1.28</b>	<b>764</b>	<b>24.89</b>	<b>34.82</b>	<b>663</b>	<b>21.58</b>	<b>30.20</b>	<b>1427</b>	<b>46.47</b>	<b>65.01</b>	<b>71.47</b>	<b>76.78</b>
T4	4	♂	3292	2360	163	34	1.03	807	24.52	34.21	725	22.03	30.73	1533	46.55	64.95	71.68	76.62
		♀	2819	2040	164	36	1.27	718	25.47	35.20	613	21.73	30.03	1331	47.21	65.23	72.36	78.17
		♂	<b>3056</b>	<b>2200</b>	<b>163</b>	<b>35</b>	<b>1.14</b>	<b>763</b>	<b>24.96</b>	<b>34.67</b>	<b>669</b>	<b>21.89</b>	<b>30.41</b>	<b>1432</b>	<b>46.85</b>	<b>65.08</b>	<b>71.99</b>	<b>77.33</b>

**Statistical analysis - Body weight at 43 days of age**

**Tab. No. 5**

Treatment	Tr. No.	Cocks				Hens			
		Number of birds	Average body weight	Standard deviation	Coefficient of variation	Number of birds	Average body weight	Standard deviation	Coefficient of variation
			g/birds	g/birds	%		g/birds	g/birds	%
T1	1	203	3177.93	357.36	11.24	232	2754.67	336.21	12.21
T2	2	203	3303.61	317.83	9.62	235	2827.39	388.43	13.74
T3	3	205	3244.12	317.12	9.78	227	2784.00	327.55	11.77
T4	4	179	3191.09	392.91	12.31	256	2741.26	332.55	12.13

## Statistical analyses of performance results

Performance results were statistically evaluated using the ANOVA single-factor model (Duncan test, Scheffe test).

The following symbols are used for levels of significance:

- $p \leq 0,001$       \* \* \*    - differences are very high significant
- $p \leq 0,01$        \* \*     - differences are high significant
- $p \leq 0,05$        \*      - differences are significant
- $p > 0,05$         o      - differences are not significant

**Body weight - day 1**

**Tab. No. 6a**

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Duncan test			
					T1	T2	T3	T4
T1	1	8	44.37500	1.121491		o	o	o
T2	2	8	44.39750	0.772893	0.960413		o	o
T3	3	8	44.28750	0.545364	0.846648	0.819504		o
T4	4	8	44.05625	1.028313	0.508865	0.494571	0.609829	

**Body weight - day 14****Tab. No. 6b**

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Scheffe test			
					T1	T2	T3	T4
T1	1	444	495.1464	87.21013		o	**	o
T2	2	443	499.6998	87.39763	0.897468		*	o
T3	3	443	518.0880	85.10289	0.001771	0.021536		**
T4	4	443	497.1603	91.65684	0.989787	0.979968	0.005792	

**Body weight - day 28****Tab. No. 6c**

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Scheffe test			
					T1	T2	T3	T4
T1	1	439	1665.011	242.2113		o	o	o
T2	2	440	1678.918	242.4148	0.872955		o	o
T3	3	439	1685.711	236.2274	0.670550	0.982691		o
T4	4	440	1643.132	263.1691	0.629225	0.199937	0.087292	

**Body weight - day 43****Tab. No. 6d**

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Scheffe test			
					T1	T2	T3	T4
T1	1	435	2952.191	405.3299		**	o	o
T2	2	438	3048.103	428.9640	0.008378		o	***
T3	3	432	3002.343	395.9469	0.362923	0.445837		o
T4	4	435	2926.366	421.2036	0.837477	0.000293	0.062433	



**Body weight (BW) per box**

**Tab. No. 7a**

Treatment	Tr. No.	Box No.	Day 1		Day 14		Day 28		Day 43	
			Birds	BW	Birds	BW	Birds	BW	Birds	BW
				g		g		g		g
T1	1	2	56	44.91	56	501.91	56	1664.21	56	3173.88
		5	56	45.53	55	494.02	55	1591.27	54	2978.15
		9	56	44.04	55	535.20	54	1565.00	54	2978.96
		16	56	43.86	56	510.95	56	1670.50	55	2969.53
		18	56	43.86	56	474.04	55	1635.93	55	2889.93
		23	56	45.96	55	501.67	54	1698.37	53	2863.08
		27	56	42.37	56	479.09	55	1713.15	56	2925.59
		31	56	44.47	55	464.56	54	1782.50	52	2825.69
T2	2	1	56	44.56	55	431.31	55	1615.07	55	3227.49
		8	56	44.04	56	532.68	56	1590.89	55	3104.71
		12	56	45.44	54	524.07	53	1641.45	53	3036.62
		13	56	43.51	56	506.52	56	1615.80	56	3042.09
		20	56	43.86	56	536.63	54	1761.57	54	3084.96
		22	56	43.77	54	483.30	54	1693.46	53	3019.70
		28	56	45.61	56	495.36	56	1704.70	56	2990.63
		30	56	44.39	56	486.80	56	1808.71	56	2882.02
T3	3	3	56	44.30	55	503.44	55	1703.05	55	3102.35
		6	56	43.86	56	535.57	55	1568.16	55	2860.36
		11	56	44.21	55	513.29	55	1615.35	54	3073.20
		14	56	43.86	56	536.73	56	1569.84	56	2965.80
		19	56	45.09	54	529.44	53	1762.75	52	3092.38
		24	56	44.91	56	512.02	55	1742.47	53	2977.04
		26	56	44.56	55	526.35	55	1735.11	52	3037.31
		29	56	43.51	56	488.07	55	1793.85	55	2918.15
T4	4	4	56	44.65	56	510.45	56	1596.98	56	3030.88
		7	56	44.82	54	546.59	54	1571.61	52	3006.23
		10	56	43.86	55	549.71	53	1669.91	53	3102.40
		15	56	44.21	56	490.59	56	1566.13	55	2883.85
		17	56	42.11	56	446.73	56	1541.05	56	2708.59
		21	56	42.98	54	460.39	54	1688.61	53	2972.62
		25	56	44.91	56	517.45	56	1736.84	55	2875.91
		32	56	44.91	56	456.77	55	1776.82	55	2844.95

Weight gain (WG) and daily weight gain (DWG) per box

Tab. No. 7b

Treatment	Tr. No.	Box No.	Day 1 - 14		Day 15 - 28		Day 29 - 43		Day 1 - 43	
			WG	DWG	WG	DWG	WG	DWG	WG	DWG
			g	g	g	g	g	g	g	g
T1	1	2	457.00	32.64	1162.30	83.02	1509.66	100.64	3128.97	72.77
		5	448.49	32.03	1097.25	78.38	1386.88	92.46	2932.62	68.20
		9	491.16	35.08	1029.80	73.56	1413.96	94.26	2934.92	68.25
		16	467.09	33.36	1159.55	82.83	1299.03	86.60	2925.67	68.04
		18	430.18	30.73	1161.89	82.99	1254.00	83.60	2846.07	66.19
		23	455.71	32.55	1196.70	85.48	1164.71	77.65	2817.12	65.51
		27	436.72	31.19	1234.06	88.15	1212.44	80.83	2883.22	67.05
		31	420.09	30.01	1317.94	94.14	1043.19	69.55	2781.22	64.68
T2	2	1	386.75	27.62	1183.76	84.55	1612.42	107.49	3182.93	74.02
		8	488.64	34.90	1058.21	75.59	1513.82	100.92	3060.67	71.18
		12	478.63	34.19	1117.38	79.81	1395.17	93.01	2991.18	69.56
		13	463.01	33.07	1109.29	79.23	1426.29	95.09	2998.58	69.73
		20	492.77	35.20	1224.95	87.50	1323.39	88.23	3041.10	70.72
		22	439.53	31.39	1210.17	86.44	1326.24	88.42	2975.93	69.21
		28	449.75	32.12	1209.34	86.38	1285.93	85.73	2945.02	68.49
		30	442.41	31.60	1321.91	94.42	1073.30	71.55	2837.63	65.99
T3	3	3	459.14	32.80	1199.62	85.69	1399.29	93.29	3058.05	71.12
		6	491.71	35.12	1032.59	73.76	1292.20	86.15	2816.50	65.50
		11	469.08	33.51	1102.05	78.72	1457.86	97.19	3028.99	70.44
		14	492.87	35.21	1033.11	73.79	1395.96	93.06	2921.94	67.95
		19	484.35	34.60	1233.31	88.09	1329.63	88.64	3047.29	70.87
		24	467.11	33.36	1230.45	87.89	1234.57	82.30	2932.13	68.19
		26	481.79	34.41	1208.76	86.34	1302.20	86.81	2992.75	69.60
		29	444.56	31.75	1305.78	93.27	1124.29	74.95	2874.64	66.85
T4	4	4	465.80	33.27	1086.54	77.61	1433.89	95.59	2986.23	69.45
		7	501.77	35.84	1025.02	73.22	1434.62	95.64	2961.41	68.87
		10	505.85	36.13	1120.20	80.01	1432.49	95.50	3058.54	71.13
		15	446.38	31.88	1075.54	76.82	1317.73	87.85	2839.64	66.04
		17	404.62	28.90	1094.32	78.17	1167.54	77.84	2666.48	62.01
		21	417.41	29.81	1228.22	87.73	1284.01	85.60	2929.64	68.13
		25	472.54	33.75	1219.39	87.10	1139.07	75.94	2831.00	65.84
		32	411.86	29.42	1320.05	94.29	1068.13	71.21	2800.04	65.12

Treatment	Tr. No.	Box No.	Feed conversion ratio		
			Day 14	Day 28	Day 43
			g/kg LW	g/kg LW	g/kg LW
T1	1	2	1134.95	1457.68	1728.12
		5	1191.15	1533.11	1821.60
		9	1090.72	1493.08	1784.53
		16	1044.98	1355.45	1738.84
		18	1224.29	1393.64	1763.25
		23	1266.19	1374.40	1830.01
		27	1209.51	1337.56	1721.49
		31	1249.80	1332.03	1825.32
T2	2	1	1361.01	1540.25	1701.94
		8	1189.41	1487.26	1716.77
		12	1038.12	1434.37	1754.63
		13	1146.48	1395.81	1684.58
		20	1176.33	1366.81	1693.07
		22	1342.85	1403.20	1738.19
		28	1186.01	1334.55	1711.72
30	1228.86	1319.01	1811.72		
T3	3	3	1166.35	1414.28	1767.52
		6	1076.95	1620.80	1829.43
		11	1149.62	1442.48	1708.49
		14	988.12	1444.64	1723.52
		19	1232.59	1315.62	1758.86
		24	1217.17	1347.79	1810.50
		26	1219.30	1360.00	1822.26
29	1280.55	1355.58	1793.89		
T4	4	4	1135.21	1465.93	1722.22
		7	995.01	1591.20	1847.01
		10	1073.40	1372.16	1690.86
		15	1187.35	1442.37	1749.34
		17	1415.44	1424.12	1802.66
		21	1301.59	1421.93	1780.33
		25	1123.99	1340.69	1795.97
		32	1243.21	1336.66	1841.68

Feed consumption per 1 kg of weight gain (WG) per box

Tab. No. 7d

Treatment	Tr. No.	Box No.	Feed consumption per 1 kg of weight gain			
			1-14 days	15-28 days	29-43 days	1-43 days
			g/kg WG	g/kg WG	g/kg WG	g/kg WG
T1	1	2	1246.48	1597.04	2026.24	1752.92
		5	1314.10	1687.52	2159.01	1850.64
		9	1189.91	1706.98	2109.91	1812.19
		16	1143.10	1492.26	2237.13	1765.03
		18	1349.12	1463.85	2248.66	1790.82
		23	1396.19	1420.44	2520.33	1861.17
		27	1326.86	1387.71	2247.23	1746.61
		31	1384.46	1361.23	2687.06	1855.39
T2	2	1	1519.88	1605.97	1864.17	1726.18
		8	1296.61	1637.19	1960.56	1741.60
		12	1140.27	1624.43	2134.18	1782.71
		13	1254.22	1509.66	2011.72	1709.02
		20	1281.04	1452.86	2133.97	1718.18
		22	1479.44	1427.72	2168.76	1764.66
		28	1306.29	1395.39	2211.71	1738.23
30	1352.16	1352.21	2606.32	1839.58		
T3	3	3	1280.72	1518.67	2197.87	1793.59
		6	1173.02	1907.88	2084.25	1858.34
		11	1259.71	1579.36	2010.62	1734.16
		14	1076.05	1681.82	2037.12	1749.39
		19	1351.41	1351.84	2380.90	1786.73
		24	1334.20	1403.16	2505.18	1839.33
		26	1333.95	1421.44	2486.13	1850.76
29	1405.88	1383.93	2500.32	1821.37		
T4	4	4	1244.03	1621.31	2007.65	1747.97
		7	1087.03	1910.53	2133.09	1876.26
		10	1168.03	1518.20	2078.45	1715.90
		15	1304.94	1558.69	2116.09	1776.64
		17	1562.75	1427.66	2302.32	1831.13
		21	1440.06	1467.34	2258.56	1807.55
		25	1230.82	1432.65	2502.07	1824.65
		32	1378.77	1369.52	2686.78	1871.65

Feed consumption per box

Tab. No. 7e

Treatment	Tr. No.	Box No.	Feed consumption			
			Starter (1-14 days)	Grower (15-28 days)	Finisher (29-43 days)	Total
			kg	kg	kg	kg
T1	1	2	31.90	103.95	171.30	307.15
		5	32.46	101.84	161.71	296.01
		9	32.27	95.00	161.10	288.37
		16	29.90	96.90	161.02	287.82
		18	32.50	93.73	155.09	281.32
		23	35.00	92.30	154.07	281.37
		27	32.45	95.05	156.43	283.93
		31	32.00	98.15	150.29	280.44
T2	2	1	32.49	104.56	165.32	302.37
		8	35.48	97.02	164.43	296.93
		12	29.49	96.21	157.81	283.51
		13	32.52	93.78	160.68	286.98
		20	35.35	96.65	152.50	284.50
		22	35.65	93.30	155.06	284.01
		28	32.90	94.50	159.27	286.67
		30	33.50	100.10	163.69	297.29
T3	3	3	32.40	100.20	169.15	301.75
		6	32.30	108.40	148.13	288.83
		11	32.57	95.73	157.45	285.75
		14	29.70	97.30	159.25	286.25
		19	35.40	89.00	160.42	284.82
		24	34.90	94.90	160.70	290.50
		26	35.40	94.50	165.35	295.25
		29	35.00	100.10	154.61	289.71
T4	4	4	32.45	98.65	161.21	292.31
		7	29.50	105.75	162.13	297.38
		10	32.54	94.16	157.80	284.50
		15	32.62	93.88	155.34	281.84
		17	35.41	87.49	150.53	273.43
		21	32.58	97.32	154.63	284.53
		25	32.57	97.83	156.91	287.31
		32	31.80	99.60	157.84	289.24