

## [9] 3 miasta

- Gravity **10.5 BLG**
- ABV ---
- IBU **27**
- SRM **9.9**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **51 C**, Time **10 min**
- Temp **67 C**, Time **60 min**

### Mash step by step

- Heat up **15.1 liter(s)** of strike water to **54.9C**
- Add grains
- Keep mash **10 min** at **51C**
- Keep mash **60 min** at **67C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1 kg (26.5%)	80 %	4
Grain	Strzegom Wiedeński	1 kg (26.5%)	79 %	10
Grain	Strzegom Monachijski typ I	1 kg (26.5%)	79 %	16
Grain	Biscuit	0.77 kg (20.4%)	79 %	50

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Kent Goldings	30 g	60 min	5.5 %
Aroma (end of boil)	Kent Goldings	20 g	15 min	5.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M79 Burton Union	Ale	Liquid	1200 ml	Mangrove Jack's

### Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	15 min

Water Agent	Gips piwowarski	8 g	Mash	70 min
Flavor	prażone orzechy laskowe	200 g	Boil	10 min
Fining	Biersol Brewferm	8 g	Boil	3 min
Other	Cukier kandyzowany z sokiem z pomarańczy	111 g	Bottling	---

## Notes

- Fermentowałem w 19-20°C - chujnia na maxa wyszło z wyraźnym acetonem w smaku i zapachu poszło jako nawóz dla drzewek :)  
*Mar 24, 2016, 2:22 PM*