

## NZPA 12'

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- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **36**
- SRM **5.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **3 %**
- Size with trub loss **10.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **11.9 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **7 liter(s)**
- Total mash volume **9.2 liter(s)**

### Steps

- Temp **68 C**, Time **1 min**
- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **7 liter(s)** of strike water to **72.1C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **1 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **7.1 liter(s)** of **76C** water or to achieve **11.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2 kg (90.9%)	79 %	6
Grain	Strzegom Karmel 30	0.2 kg (9.1%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Pacific Jade	10 g	60 min	13 %
Boil	Rakau (NZ)	10 g	5 min	9.5 %
Dry Hop	Waimea	20 g	3 day(s)	17 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

### Notes

- Uwodnienie drożdży 20°C 20 min  
Zadanie drożdży w temp 16-18°C  
Fermentacja burzliwa 19-20°C  
Fermentacja cicha 3 dni 16-18°C

7 g glukozy na 1L piwa  
*Apr 8, 2018, 5:01 PM*