Jacek

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **45**
- SRM **15.3**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

Steps

- Temp **65 C**, Time **60 min**

Mash step by step

- Heat up **10.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **8.2 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1.5 kg *(42.9%)*	80 %	4
Grain	Strzegom Wiedeński	1 kg *(28.6%)*	79 %	10
Grain	Strzegom Karmel 150	0.5 kg *(14.3%)*	75 %	150
Grain	Viking red ale	0.5 kg *(14.3%)*	75 %	70

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	magnat	13 g	60 min	11.5 %
Boil	Zythos	10 g	10 min	9.2 %
Boil	Centennial	10 g	10 min	9.4 %
Boil	Equinox	10 g	10 min	13 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-04	Ale	Dry	11 g	fermentis

Extras

Type	Name	Amount	Use for	Time
Fining	mech	5 g	Boil	10 min

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.