EXTRA SPECIAL BITTER

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **46**
- SRM **8.5**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **21.5 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **70.7C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **24.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	2 kg *(40%)*	80 %	5
Grain	Monachijski typ II	2 kg *(40%)*	79 %	22
Grain	Red	1 kg *(20%)*	79 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	25 g	60 min	6.6 %
Boil	Fuggles	25 g	45 min	6.6 %
Boil	East Kent Goldings	25 g	30 min	3.6 %
Boil	East Kent Goldings	25 g	15 min	3.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis