

## FES 24l. "uCieszny Browarek" :-)

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **34**
- SRM **24.3**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **30.6 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **2.66 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **25.1 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **18.2 liter(s)** of strike water to **72.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **19.3 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	płatki jęczmienne	0.46 kg (6.7%)	--- %	3
Grain	pilzneński Viking Malt	5.71 kg (83.4%)	--- %	4
Grain	jęczmień palony Weyermann	0.23 kg (3.4%)	--- %	1150
Grain	caraaroma Weyermann	0.34 kg (5%)	--- %	350
Grain	carafa I Weyermann	0.11 kg (1.6%)	--- %	900

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga 11,3% AA	10 g	55 min	11.3 %
Boil	East Kent Goldings	40 g	55 min	5.1 %
W oryginalnym przepisie Doris 35g Aurora				
Boil	East Kent Goldings	60 g	10 min	5.1 %
W oryginalnym przepisie Doris 45g Styrian Goldings				

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	13.14 g	Safale

### Notes

- Jeśli lubisz mocny aromat palony (pożądany w stoucie) wrzuc ciemne słody od początku zacierania, jeśli lubisz piwa bardziej łagodne, to wrzuc palony jęczmień i słód barwiący na koniec zacierania.  
*Nov 22, 2018, 11:40 AM*