Letniak

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **22**
- SRM **5.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **13.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **17.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.5 liter(s)**
- Total mash volume **12.2 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **30 min**

Mash step by step

- Heat up **9.5 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **73C**
- Sparge using **10.5 liter(s)** of **76C** water or to achieve **17.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1.25 kg *(43%)*	80 %	4
Grain	Strzegom Pszeniczny	0.2 kg *(6.9%)*	81 %	6
Grain	Strzegom Wiedeński	1 kg *(34.4%)*	79 %	10
Grain	Karmelowy Jasny 30EBC	0.25 kg *(8.6%)*	75 %	30
Sugar	Candi Sugar, Clear	0.21 kg *(7.2%)*	78.3 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galaxy	5 g	60 min	14.5 %
Aroma (end of boil)	Motueka	5 g	15 min	8 %
Aroma (end of boil)	Amarillo	5 g	10 min	8.7 %
Aroma (end of boil)	Galaxy	5 g	5 min	14.5 %
Dry Hop	Motueka	7.5 g	3 day(s)	8 %
Dry Hop	Amarillo	7.5 g	3 day(s)	8.7 %
Dry Hop	Galaxy	7.5 g	3 day(s)	14.5 %
Dry Hop	Rakau (NZ)	43 g	3 day(s)	9.5 %

Yeasts

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

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10 g	Fermentis