Lager#1

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **35**
- SRM **9.5**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **38.3 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.9 liter(s)**
- Total mash volume **29.2 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **73 C**, Time **20 min**

Mash step by step

- Heat up **21.9 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **73C**
- Sparge using **23.7 liter(s)** of **76C** water or to achieve **38.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg *(68.5%)*	80 %	4
Grain	Strzegom Karmel 300	0.3 kg *(4.1%)*	70 %	299
Grain	Strzegom Monachijski typ II	1 kg *(13.7%)*	79 %	22
Grain	Viking Pale Ale malt	1 kg *(13.7%)*	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	40 g	90 min	4.5 %
Boil	Marynka	20 g	40 min	10 %
Aroma (end of boil)	Saaz (Czech Republic)	60 g	5 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	11.5 g	Fermentis Division of S.I.Lesaffre