

lager

- Gravity **12.4 BLG**
- ABV ---
- IBU **40**
- SRM **7.9**
- Style **Lite American Lager**

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 **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **18.9 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **57C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **64C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | Strzegom Pilzneński | 4 kg (88.9%) | 80 % | 4 |
| Grain | Pszeniczny | 0.3 kg (6.7%) | 85 % | 4 |
| Grain | Strzegom Karmel 150 | 0.2 kg (4.4%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Lublin (Lubelski) | 20 g | 20 min | 4 % |
| Boil | Marynka | 25 g | 60 min | 10 % |
| Boil | Lublin (Lubelski) | 20 g | 10 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|-------|------|--------|------------------------------------|
| Saflager S-23 | Lager | Dry | 11 g | Fermentis Division of S.I.Lesaffre |