

# amerikan lager

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **24**
- SRM **3.5**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **27.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **14.4 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **60 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

## Fermentables

| Type    | Name                   | Amount         | Yield | EBC |
|---------|------------------------|----------------|-------|-----|
| Grain   | Viking Pilsner malt    | 4 kg (75.5%)   | 82 %  | 4   |
| Grain   | Karamel Pils Steinbach | 0.8 kg (15.1%) | 79 %  | 6   |
| Adjunct | ryż                    | 0.5 kg (9.4%)  | --- % | --- |

## Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Marynka           | 25 g   | 60 min | 8.5 %      |
| Boil    | Lublin (Lubelski) | 15 g   | 20 min | 3.8 %      |

## Yeasts

| Name          | Type  | Form | Amount | Laboratory |
|---------------|-------|------|--------|------------|
| Saflager S-23 | Lager | Dry  | 11.5 g | ---        |