

# india helles lager

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- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **33**
- SRM **5.3**
- Style **Premium American Lager**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **4 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.1 liter(s)**
- Total mash volume **28.4 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **22.1 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **78C**
- Sparge using **9.1 liter(s)** of **76C** water or to achieve **24.9 liter(s)** of wort

## Fermentables

| Type  | Name                   | Amount        | Yield | EBC |
|-------|------------------------|---------------|-------|-----|
| Grain | Pilzneński             | 5 kg (79.4%)  | 81 %  | 4   |
| Grain | Monachijski            | 1 kg (15.9%)  | 80 %  | 16  |
| Grain | Briess - Carapils Malt | 0.3 kg (4.8%) | 74 %  | 3   |

## Hops

| Use for | Name           | Amount | Time     | Alpha acid |
|---------|----------------|--------|----------|------------|
| Boil    | Magnum szyszki | 20 g   | 60 min   | 10 %       |
| Boil    | Chinook        | 10 g   | 10 min   | 13 %       |
| Boil    | Simcoe         | 10 g   | 10 min   | 13.2 %     |
| Boil    | Mosaic         | 10 g   | 10 min   | 10 %       |
| Boil    | Simcoe         | 10 g   | 0 min    | 13.2 %     |
| Boil    | Chinook        | 10 g   | 0 min    | 13 %       |
| Boil    | Mosaic         | 10 g   | 0 min    | 10 %       |
| Dry Hop | Simcoe         | 80 g   | 5 day(s) | 13.2 %     |
| Dry Hop | Chinook        | 80 g   | 5 day(s) | 13 %       |
| Dry Hop | Mosaic         | 80 g   | 5 day(s) | 10 %       |

## Yeasts

| Name                                  | Type  | Form  | Amount | Laboratory      |
|---------------------------------------|-------|-------|--------|-----------------|
| Mangrove Jack's<br>M84 Bohemian Lager | Lager | Slant | 100 ml | Mangrove Jack's |

## Notes

- 10-12C 2 tygodnie fermentacji  
14C przez ostatnie 3 dni - redukcja di-acetylu  
następnie na cichą - 5 dni  
*Feb 28, 2018, 6:31 PM*