



# **DELIVERING QUALITY**

**HOW TO RUN YOUR WASH TO MAXIMIZE SUCCESS**

**MIKE GRACEMAN, SENIOR PRODUCT MANAGER**  
***ZepVehicleCare***

# TABLE OF CONTENTS

|   |    |
|---|----|
| WHY IS QUALITY IMPORTANT?.....                | 3  |
| CHEMICAL QUALITY .....                        | 4  |
| 1. How to Check Your Chemistry Quality .....  | 4  |
| 2. Common Chemistry Quality Issues .....      | 5  |
| 3. How to Choose Quality Chemistry .....      | 7  |
| WATER QUALITY .....                           | 10 |
| 1. How to Check Your Water Quality .....      | 10 |
| 2. Common Water Quality Issues .....          | 10 |
| 3. Common Reclaim Quality Issues .....        | 11 |
| DISPENSING QUALITY .....                      | 14 |
| 1. How to Check Your Dispensing Quality ..... | 15 |
| 2. Common Dispensing Quality Issues .....     | 16 |
| MAINTAINING YOUR WASH QUALITY .....           | 19 |
| KEY TAKEAWAYS .....                           | 23 |

# WHY QUALITY?

## When your customer sees your car wash, what do they think?

The key to running a successful car wash is consistently delivering a quality wash. According to the ICA 2016 Consumer Study, “consumers ranked cleanliness, price, convenience, dryness and speed as significantly more important aspects of a car wash than they did just two years ago” ([source](#)). When your customers associate your car wash with cleanliness, dryness, and shininess, they associate your brand with quality and your car wash will be more successful over the long run.

## Why is it so important to deliver a quality wash?

Quality is more than just clean. Quality is consistently delivering a clean, dry, shiny, and protected car, and quality washing is a necessary part of routine vehicle maintenance. There are three main reasons that consistently delivering quality results will benefit your wash. First, a cleaner car means more satisfied customers, more loyal customers, and more repeat customers. A quality wash also means fewer rewashes, which reduces cost and customer dissatisfaction. Finally, delivering a poor quality wash can damage your brand. Making sure you are delivering a quality wash will boost your long-term business, which means that owners and operators like you will drive more revenue and more profit.

## How can you make sure that your wash is running at peak performance?

The best way to ensure that you are consistently delivering a quality wash is to run frequent quality assurance checks. We have laid out the basics of quality for your chemistry, water, and dispensing so you know what to look for during your quality assurance checks. Since some issues can have more than one cause, make sure to call your vehicle care specialist with any questions.

Let's start by looking at chemistry.

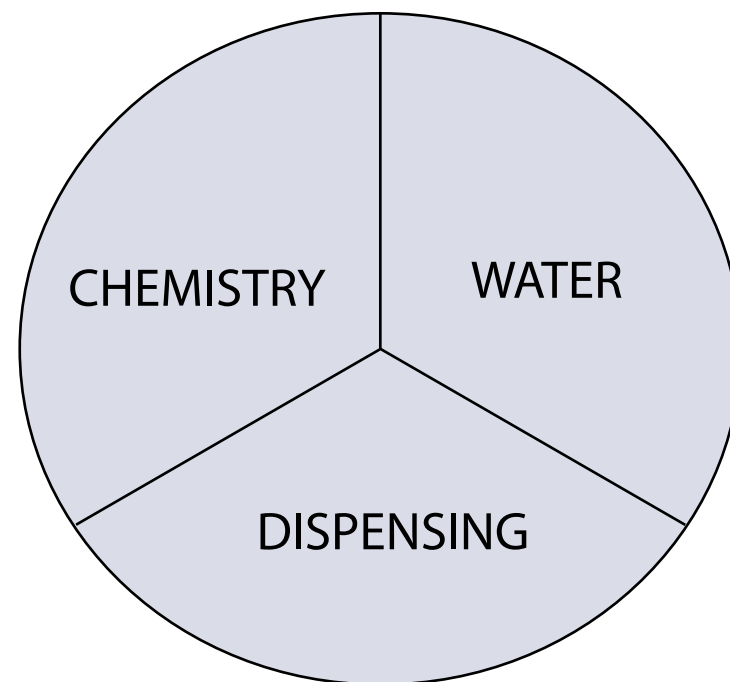


# CHEMISTRY

## Chemistry Quality Assurance Check: How to Check That Your Chemistry is Working Correctly

A “quality” wash means that you are delivering a car that is clean, dry, shiny, and protected. When examining the quality of your wash, there are three big things to keep in mind. The quality of your chemistry, your water, and your dispensing will all influence the level of quality that you can deliver to your customers.

It is important to understand the interdependence of these elements. If your dispensing quality is unsatisfactory, the effectiveness of your chemistry will suffer. However, your dispensing system itself may not be the problem; poor water quality can cause issues with your dispensing. Likewise, a water quality problem could cause an issue with the effectiveness of your chemistry, but your chemistry will also be affected if there is an issue with your dispensing.



***In order to ensure that you are always delivering a quality wash, it is crucial to perform frequent quality checks and monitor each factor.***

The right type of chemistry depends on the specific needs of your wash. Things such as local weather, precipitation types and frequency, water quality, soil makeup, and wash equipment can all affect the effectiveness of any specific chemical application or conditioner in your wash. Here are some distinct signs that a change of chemistry may be in order:

### 1. MOLDING AND RIDGES

With vehicles becoming more sleek in design, this is producing areas that are becoming very difficult to clean – areas like rocker panels, hood scoops, and trim areas. If your friction is not properly cleaning these areas, there have been numerous innovations in chemistry that can help address these issues. The best way to identify potential solutions is to consult your vehicle care specialist.

### 2. WHEELS AND TIRES

If your wheel cleaning process is not leaving your customers with shiny, spotless rims, you want to investigate the issue as soon as possible. Dirty rims are very noticeable, and you want to make sure that your customers are getting what they paid for.

### 3. SPOTS ON CARS

Again, if cars are leaving your wash with any type of spotting, they are not receiving what they paid for. Spotting can be caused by multiple factors, including ineffective rinsing or hard water issues.

## 4. WET CARS

If you have wet cars leaving your wash, it is time to examine your blowers, drying agent, or the pH of your cleaning chemistries. Low pH presoaks and body soaps may help achieve a dry car. The types of detergents and lubricants you use in your wash can help or hinder the drying process.

## 5. RUNOUT

One way to ruin a perfectly clean, dry, and shiny vehicle is to have colored foams or other high-foaming products “run out” of the trim or molding areas or mirrors and streak the vehicle. To prevent this, use products that are free rinsing and collapse quickly. Also, make sure that your chemical ratios are correct in order to prevent against excessive color and foam being produced by the product.

## 6. GENERAL CUSTOMER COMPLAINTS

In general, customer complaints are a telling sign that you have wash quality issues. When it comes to chemistry, it could be complaints about wet cars or dirty wheels, but it could also be that the customer simply does not “feel” that his or her car is clean because of a lack of a foam show, or feeling that they did not get enough soap on their car. Although a feeling is much more subjective than visible soil, this is still an important quality issue to consider. If you receive consistent feedback like this, try using a higher foaming soap or including a stronger fragrance to ensure that the experience of your chemistry matches the expectations of your customers.

## How to Choose Quality Chemistry

As stated earlier, the type of chemistry depends on the specific conditions of your wash. Therefore, to ensure that you are using quality chemistry, *find a product specialist who knows and understands both your climate, soils, water and equipment in your wash.*

***“How is this specialist helping to address the issues of my wash as a whole?”***

When looking for a specialist, ask yourself, “How is this person helping to address the issues of my wash as a whole?” To avoid chemistry quality issues, you will want to work with a vehicle care specialist who can identify your wash pain points and is skilled at identifying the right chemical makeup that is perfectly suited to resolve and prevent any quality issues you may have.

Also, keep in mind that wash quality and chemistry are not always a matter of using different chemical – mechanical action and equipment, the quality of your water, your temperatures, and your application time can also contribute to quality problems. A great vehicle care specialist will understand this, and be able to pinpoint the cause of any quality issue you have.

# FEATURE: GHS REGULATIONS

Another factor of chemistry quality is the safety of your employees. It is important to make sure that your chemistry is in compliance with OSHA standards to reduce the risk of injury accidents at your wash.

Hyper-concentrated chemistry offers smaller package sizes that weigh less than bulky barrels. The National Institute for Occupational Safety and Health (NIOSH) states that “product packed in containers that weigh less than 40 lbs may have a lower risk for employee injury”.

Be sure your staff understands the risks associated with handling chemicals at your car wash. Here are some things to keep in mind:

- Read and follow all label instructions.
- Insist your chemical supplier comply with OSHA Hazard Communication Standards by offering GHS compliant labels and SDS sheets.
- Ensure ALL products are properly labeled, including those used in secondary containers like spray bottles.
- Make sure that SDS sheets are available in a conspicuous location for ALL chemicals on site.

## THE GHS

The GHS, or the Globally Harmonized System of Classification and Labelling of Chemicals, classifies the criteria of health, physical, and environmental hazards. This includes specifying the information that needs to be present on the labels of hazardous chemicals, like car wash chemistry, and the safety data sheets (SDS). Since the United States is an active participant, it's important to make sure your chemistry is compliant.

The other thing to consider when looking for quality chemistry is the **overall cost**. You will not find the best quality or value in chemistry by comparing drum prices alone. Since wash chemistry is manufactured in multiple levels of concentration, drum prices do not provide an accurate picture of the true cost of chemical.

To find that true cost, there are two things you want to keep in mind:

## COST PER APPLICATION

This calculation accounts for the concentration of the product, so you will be able to compare chemical prices more effectively. Your vehicle care specialist should be able to provide this number for you.

## POTENTIAL REVENUE PER APPLICATION

When choosing chemistry for your wash, you should also think about the potential revenue per application. The ICA 2016 Consumer Study shows that consumers are more likely to see value and pay extra for brands they recognize – in other words, you have the opportunity to drive more revenue per car with recognized brands. The more value your customer sees in an application, the more revenue you can drive.

# WATER

## Water Quality Assurance Check: How to Check That Your Water is Working Correctly

We know that having quality chemistry is a key factor in providing a quality wash, but your chemistry will not perform well if you are operating with low quality water. Water quality affects both the quality of your wash and the quality of the experience.

Here are a few things you want to watch out for:

### 1. NON-PERFORMING CHEMICAL

If your chemistry does not seem to be doing its job, your water quality might be the issue. Check the hardness to see if your water is affecting your chemical. If it is, make sure that your water treatment system is working properly, and discuss your options with your vehicle care specialist.

### 2. SPOTTING

If cars are exiting your wash with spots left from water deposits, it is time to do something about your water quality. A great way to avoid water spotting is to implement reverse-osmosis, also known as spot-free, water in your wash. This will help you control the quality of your water by removing total dissolved solids (TDS) from your final rinse water.

The quality of your water can also affect the quality of your wash experience – for example, if your wash water is too hard, soaps or conditioners will not foam correctly. This can lower the perceived value of your wash, which is an important element in your overall quality.

## RECLAIM WATER



*PurClean Reclaim System*



There are a number of great reasons to implement a water reclamation program. Some states or counties have regulations that require the use of a reclaim system, and they are a great way to save a lot of money on your water and sewer bills regardless of where you live. Reclaim systems also make your wash eco-friendly, which can help boost both the perceived quality and value of your wash.

Low quality reclaim water can create issues for washes that are currently using or considering reclaim systems. When your reclaim system is optimized, it produces high quality water, so the quality of your wash will not be affected. However, if there is an issue with your reclaim system, there will be some noticeable wash quality issues.

## COMMON RECLAIM WATER QUALITY ISSUES

### SLIME

This is the black, goo-like substance that can coat the inside of your wash. Slime can be caused by multiple things, including non-reclaim compatible products, reclaim water pH balance, or incorrect products going into reclaim. Slime can be of organic or inorganic origin, or both. You can solve this problem by working with a qualified vehicle care specialist.

### SMELL

Smell is the most common complaint with reclaim systems. There are two ways to solve this problem:

1. Flow: Keep your water moving. Stagnant water is ideal for the growth of organic matter (like bacteria), which is the culprit of reclaim water smell.
2. Oxidation: Oxidation is the process of adding chemicals to your water that will kill any smell-causing bacteria. You can do this using either ozone or hydrogen peroxide as neither will affect the quality of your water or your wash.

If you're having issues with slime or the smell of your reclaim water, you want to resolve this wash quality issue as soon as you can – these are both quality issues that are easily noticed by your customers. **Your vehicle care specialist or reclaim system distributor should be able to help you diagnose any current quality issues, and help you select the best course of action to correct those issues.**

# DISPENSING

## Dispensing Quality Assurance Check: How to Check That Your Dispensing is Working Correctly

The third part of your quality assurance check should be your dispensing system. Like chemical and water, the quality of your dispensing system is equally important in delivering a superior wash. When it comes to dispensing systems, there are four different types:

**INJECTOR:** This is when the product is pulled by vacuum suction into a water stream traveling through a small device.

**INJECTION PUMP (ELECTRIC OR WATER DRIVE):** When product is injected into a water stream from a pump.

**HYDROMINDERS:** Your product is premixed into a “sump” chamber or tank, then “delivered” via pump (most commonly air-operated).

**PRESSURIZED DIRECT INJECTION:** This system works similarly to a regular injector; however, it uses the Venturi effect to mix the chemical and the water and uses a “booster pump” to regulate water pressure consistently.

## ACCURACY

The accuracy of your dispensing system will have a large effect on the quality of your wash. When considering dispensing accuracy, focus on dilution ratio as well as the consistency of the dosing.

***Pressurized direct injection is one of the most accurate types of dispensing system.***

Pressurized direct injection is most likely to provide the most precise dilution ratios and consistent mixed solution volume. Water pressure can fluctuate, often during your high-volume wash periods, but a pressurized direct injection dispensing system will help control those fluctuations.

No matter which type of dispensing system you are using, you may find inconsistencies. It’s important to regularly monitor dilution and application rates. Too much or too little chemistry can have a negative impact on wash quality.

**Let’s take a look at some of the most common dispensing quality issues and how to resolve them.**



## COMMON DISPENSING QUALITY ISSUES

### 1. TOO MUCH OR TOO LITTLE CHEMICAL

If you are dispensing too much or too little chemical, it means that you are either wasting money or that your application will not be as effective. If your chemical usage is too low, your customers will not see the quality or show they expect from their wash. This makes them less likely to purchase that wash package again, and they may decide to go to a different wash all together. Likewise, if your chemical usage is too high, you are ultimately wasting chemical. You can detect this problem by monitoring your overall average product usage per car, which we will cover in the next section. If you notice that you are dispensing too much or too little product, try recalculating your ratios for the adjusted water pressure. If that doesn't work, or your water pressure is inconsistent, it is time to invest in a more accurate dispensing system.



*Assure® Precision Dispensing System*

### 2. INCONSISTENT DISPENSING

If your dispensing system is not mixing your chemical and your water consistently, it may be visible to your customers in the color, foam, scent, or performance of the application. Inconsistent dispensing affects the perceived quality and value of the application by your customers. Inconsistent dispensing may look like you are running out of product, or that the customer is not getting the correct amount of chemical. Since perception is a large part of quality, you want to make sure that you are dispensing your chemical equally to avoid any rewashes or other customer satisfaction issues.

### 3. DISPENSING NO PRODUCT

If you have no product coming out of your dispensing system, fix this problem as soon as possible. If this is a dispensing problem (and not an inventory problem), it is likely that you have a clogged tip or foot valve. If you have a clogged tip, this is an easy fix – clean out the clogged tip. If a foot valve is your problem, replace the bad foot valve with a new one. If you find that you are frequently encountering clogged tips, you may want to revisit your water quality and talk to your vehicle care specialist to find a solution.

# ONGOING QUALITY ASSURANCE

## THE APPLICATION PROCESS

Once you have checked the quality of your dispensing system, it is time to run a quality check on the actual application process.

### 1. LOW FOAM PROFILE

If you find that you have a low foam profile, check to make sure that your foam generator is clean. If it isn't, cleaning it out or replacing the media should get your foam up and running. If this does not solve the problem, then you may have a water quality issue. (The harder your water, the lower your foam profile.)

### 2. INCORRECT SPRAY PATTERNS

You should also check the quality of your application spray patterns. If your applications are not achieving the right spray pattern, you likely have an applicator orifice blockage. This can affect both the performance of the application as well as the customer's perceived value of the application. If you are experiencing incorrect application spray patterns, make sure to clear out any clogging to ensure the quality of your wash or replace the nozzle or applicator if they are worn or damaged.

Now that we have covered chemistry, water, and dispensing quality, let's talk about the final factor in the quality of your wash – maintaining your quality.

## How to Maintain the Quality of Your Wash

As you can see, there are a lot of things that can decrease the quality of your wash – and, it is not always obvious when things go wrong. Consistent monitoring is required to make sure that your customers are always getting what they paid for. Train all your employees on what to look for so that issues are identified promptly and employees feel they have an impact. Expect the same from your service providers. Keep records of routine maintenance and schedule maintenance reminders based on the manufacturer's recommendation.

***Monitoring your wash quality and performance is about keeping your brand consistent and synonymous with quality.***

Customers who are less familiar with your car wash are less likely to become repeat customers if they are unsatisfied with the quality of their wash, so it is important to know as soon as possible when any quality assurance issues appear. This way, you can ensure that you are generating as many loyal customers as you can.

Let's look at how to properly monitor your wash quality.

# MEASURING YOUR CHEMICAL USAGE

A general way to measure your chemical usage is to track your usage over a period of time, then calculate the average usage of that chemical per car washed with that chemical during the designated time period.

Let's say that your top wash package contains Rain-X®. At the beginning of the month, you had X gallons of Rain-X®. At the end of the month, you have Y gallons remaining.

**BEGINNING OF MONTH:  
Gallons of Rain-X®: X**

**END OF MONTH:  
Gallons of Rain-X®: Y**

Therefore, your total Rain-X usage for the month is (x-y).

**TOTAL CHEMICAL USAGE = X – Y**

Then, look at the number of packages you sold that month containing Rain-X. Let's say you sold R packages. To calculate your average Rain-X usage per car, divide your total chemical usage (X - Y) by the number of packages your sold (R).

**AVERAGE USAGE PER CAR: (X – Y)/R**

*An experienced  
vehicle care  
specialist will  
check your  
product usage  
levels on a  
monthly basis.*

Your chemical provider should know the correct amount of chemical per car needed to achieve the desired result. If you find that your monthly average is too high or too low, check your dispensing quality.

# CHEMICAL USAGE

The first item to consistently monitor is your chemical usage. If you prefer to monitor your chemical usage manually, you will want to do the calculations above for each chemical application you offer. One thing to note about monitoring your chemical this way is that by the time you make your average usage calculations, you may have washed a lot of cars at a non-ideal quality level. Since this can ultimately damage your brand reputation, it is best to avoid this as much as possible. The easiest way to monitor usage is by using a remote monitoring app that sends an alert to your mobile phone the moment your usage levels are off. This way, you can address the problem immediately – before you are dealing with unhappy customers.



Assure® analytics remote monitoring app dashboard



# KEY TAKEAWAYS

## INVENTORY

You should also monitor your inventory. It's important for your customers to know that your wash will always have quality offerings available, which means you never want to run low on supplies.

Inventory can be tracked manually, or it can be remotely monitored with an app and programmed to send you alerts when your supply is low.

## CUSTOMER SATISFACTION

The final piece of effective car wash monitoring is keeping track of customer satisfaction levels. There are a lot of ways to do this, including email surveys in exchange for coupons or free wash upgrades, attaching survey links to the bottom of receipts, or engaging with your community on social media. The higher the overall quality of your wash experience is, the higher your overall customer satisfaction will be – which will keep your customers coming back time after time.



### ABOUT MIKE GRACEMAN

Mike has been working full time in the car wash industry since 1990, when he joined his family business which included Grace-Lee Products, Inc. and 3 car washes in Minnesota. Prior to this, he was a finance analyst in Chicago after graduating from the University of Wisconsin – Madison with a degree in Marketing and Finance. Ecolab acquired Grace-Lee in 1997, who later sold the Vehicle Care Division to Zep Inc in 2012 where he has worked ever since. Throughout his 27 years in the car wash industry, he has held a variety of roles in sales, marketing, operations and Lean Six Sigma. In his spare time, he enjoys travelling, camping and skiing with his family and seeking out the latest consumer electronic innovations.

1. The key to running a successful car wash is consistently delivering a quality wash.

2. The best way to ensure that you are delivering a quality wash is to run regular and frequent quality assurance checks.

3. Work with a vehicle care specialist who can identify your wash pain points and help prevent product quality issues.

4. Consistent monitoring is required to make sure that your customers are always getting what they paid for.

5. The higher the overall quality of your wash experience is, the higher your overall customer satisfaction will be – which will keep your customers coming back time after time.



A close-up, low-angle shot of a car's front end, showing the hood and wheel arch. Water is being sprayed onto the car from the right, creating a dynamic, high-speed effect. The background is a blurred blue sky with white clouds. A large, dark blue diagonal shape overlays the left side of the image.

# **ZepVehicleCare**

[www.zepvehiclecare.com](http://www.zepvehiclecare.com)

Questions? 1-877-326-9274